16/8/4CH MPEG-4 DVR

~Digital Video Recorder~

Real time performance 30IPS (N) / 25IPS (P) per channel

User's Manual

Please read instructions thoroughly before operation and retain it for future reference.

Thank-You Note Before You Get Start

First of all, we would like to express our gratitude to you for purchasing this product. This product is designed to meet your personal needs with our great industry-designing ability and our everlasting perseverance to the quality of all our products.

This manual will introduce to you how to install this apparatus. Please keep it well for your future reference.

Now, we would like to invite you to personally experience all of the powerful functions this product offers.

Note: Version: 1030-08-H3-04-V354-07 ; 0023

CAUTION

RISK OF ELECTRIC SHOCK

CAUTION:
To reduce the risk of electric shock, do not expose this apparatus to rain or moisture.

Only operate this apparatus from the type of power source indicated on the label. Failure to do so may cause injury or death by electric shock and invalidates the warranty.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CE Mark

This apparatus is manufactured to comply with the radio interference requirements of EN 55022 : 1998 + A1 : 200, EN61000-3-2 : 2000, EN6100-3-3:1995, EN50130-4 : 1995 + A1 : 1998.

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1.1 FEATURES

General:

- MPEG-4 real time compression format
- High resolution recording (For 16 channels):
  Frame: 720 × 480 pixels with 120 IPS〈NTSC〉/ 720 × 576 pixels with 100 IPS 〈PAL〉
  CIF: 352 × 240 pixels with 480 IPS〈NTSC〉/ 352 × 288 pixels with 400 IPS 〈PAL〉
- 2 HDD bases built-in, each can support more than 400GB
- Record audio with 4ch in and 2ch out
- Image quality setting: Best, High, Normal and Basic
- Support PELCO-D protocol
- System auto recovery after power reconnected
- Web function supports MJPEG compression format for transmitting over the internet
- Support TCP/IP, PPPoE, DHCP and DDNS network connection

Operation:

- Pentaplex functions (live display, record, playback, backup, and network)
- Support manual / timer / motion / alarm / remote recording functions
- Support covert screen for live view channels
- Watermark function ensures authentication of recorded images
- Support daylight saving function
- Easy system upgrade via USB
- Easy file backup methods with USB, DVD R/W or CD R/W and network remote recording backup
- IR remote control of the system and PTZ through RS-485

Events:

- Advanced motion detection function (4 different adjustable factors of motion detection sensitivity) and convenient search function.
- Alarm trigger recording will send alert with images to designated e-mail and FTP address
- Supports pre-alarm recording (8MB).

Network Viewing:

- Remote surveillance on mobile phone via 3G & GPRS or on PC through internet connection
- Web surveillance supports multiple viewers simultaneously (up to 5 users)

External Device:

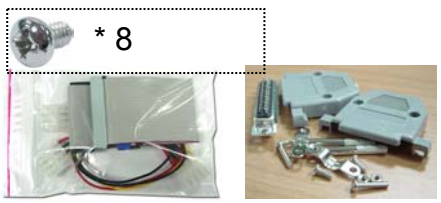
- Extensive recording time by connected to Independent Disk Array.
- Optional: Independent disk array; VGA connector

1.2 PACKAGE CONTENTS

Digital Video Recorder

Adapter

Licensed Software AP



Accessories Packs

IR Transmitter and IR Receiver (1.5m)

Manual & Quick Start

1.3 SPECIFICATION

Video System	NTSC / PAL (switch able)
Video Compression Format	MPEG 4
Video Input	16 / 8 / 4 Channels. Composite video signal 1 Vp-p 75Ω BNC
Video Loop Out	16 / 8 / 4 Channels. Composite video signal 1 Vp-p 75Ω BNC
Video Output	Main Monitor Output: Composite video signal 1 Vp-p 75Ω BNC Call Monitor Output: Composite video signal 1 Vp-p 75Ω BNC
Maximum Recording Rate	Take 16 channels as an example ~ Frame: 720 × 480 pixels with 120 IPS〈NTSC〉/ 720 × 576 pixels with 100 IPS 〈PAL〉 CIF: 352 × 240 pixels with 480 IPS〈NTSC〉/ 352 × 288 pixels with 400 IPS 〈PAL〉
Adjustable Recording Speed	Take 16 channels as an example ~ Frame: 120, 60, 30, 15 IPS <NTSC> / 100, 50, 25, 12 IPS <PAL> CIF: 480, 240, 120, 60 IPS <NTSC> / 400, 200, 100, 50 IPS <PAL>
Image Quality Setting	Best, High, Normal, and Basic
Hard Disk Storage	IDE type, ATA66, supported HDD ＊ 1, support each HDD capacity over 400GB
HDD Quick Cleaning	Quick clean up the “index system” of the recorded files. 250GB under 2 seconds
Recording Mode	Manual／Timer／Motion／Alarm
Watermark	Yes
Refresh Rate	16 channels: 480 IPS for NTSC / 400 IPS for PAL
Pentaplex Operation	Pentaplex functions (live display, record, playback, backup, and network)
Audio I/O	4 audio inputs, 2 audio outputs (Mono)
Motion Detection Area	16 × 12 grids per camera for all channels
Motion Detect Sensitivity	4 adjustable variable with precise calculation for motion detection
Pre-alarm Recording	Yes (8 MB)
Backup Device	USB1.1 backup and network remote recording backup
USB Interface	For 16 / 8 channels: Support two USB 1.1 ports (front panel * 1, back panel * 1) For 4 channels: Support one USB 1.1 port (front panel * 1)

Specification Continued…	
Web Transmitting Compression Format	Motion JPEG
Ethernet	10/100 Base-T. Support remote control and live view via Ethernet.
Mobile Surveillance	Support 3G & GPRS to access the system via mobile phone (require J2ME, MIDP2.0 protocol)
Web Interface	Support licensed software AP, and IE browser
Remote Alarm Notification	E-mail images, and images uploading to FTP site's specific account
Network Protocol	TCP/IP, PPPoE, DHCP and DDNS
Remote Control	Remote control DVR and PTZ via IR transmitter (RS-485)
PTZ control	Support PELCO-D protocol
Dwell Time (Sequential Channel Switch)	Programmable with adjustable dwell time
Alarm I/O	For 16 channels ~ 16 inputs, 1 output For 8 channels ~ 8 inputs, 1 output For 4 channels ~ 4 inputs, 1 output
Picture Zoom	Support 2X digital zoom function
Key Lock	Yes
Video Loss Detection	Yes
Camera Title	Support up to 6 letters
Video Adjustable	Hue／Color／Contrast／ Brightness
Date Display Format	YY/MM/DD, DD/MM/YY, MM/DD/YY, and Off
Daylight Saving	Yes
Power Source	DC 19V
Power Consumption	＜64 W
Operating Temperature	10℃ ~ 40℃ (50℉~104℉)
Dimensions (mm)	432mm (W) × 90mm (H) × 326mm (D)
System Recovery	System auto recovery after power reconnected
Optional Peripherals	**Independent disk array; VGA connector**

1.4 FRONT PANEL

[16 / 8 / 4 Channels]

1) POWER:
Press “POWER” button to turn on/ turn off the DVR.
(Under recording mode, please stop record before turn off the DVR)

2) MENU:
Press “MENU” button to enter main menu.

3) ENTER / RECORD:
Press “ENTER” button to confirm.
Press “RECORD” to activate the manual recording.

4) “＋ “ “ － ”:
Press “＋ “ or “ － ” button to change the setting in the menu / to select the channel.
Press “＋“ and “－” buttons to open / close the DVD / CD WRITER.

5) USB:
Support firmware update and files backup.

6) LED LIGHT:
POWER: Power on
STANDBY: Standby
HDD: HDD is reading or recording
HDD Full: HDD is full.
ALARM: Once the alarm is triggered
TIMER: When timer recording is turned on.
REC: Under recording status
PLAY: Under playing status

7) MODE :

Press “MODE ” button to switch channel display mode.

Press “ ▮▮ ” button to pause the play back files.

9) “ ■ ” :
Press “ ■ ” button to stop the play back files.

10) “ ◀◀ “ :
Under playback mode, press “ ◀◀ ” button to fast rewind.

11) “ ▶▶ “ :
Under playback mode, press “ ▶▶ ” to fast forward.

12) “ZOOM” :
Press “ZOOM” button to enlarge the picture of selected channel (2X digital zoom).

13) “PLAY” :
Press “PLAY” button to playback recorded files.

14) “▲▼◄►“ :
Press “▲▼◄►” to move the cursor up / down / left / right.

15) “SHIFT” + “SEQ” :
Press “SHIFT” + “SEQ”to activate the call monitor function and press “SEQ” to escape the call monitor mode.

16) “SHIFT” + “AUDIO“ :
Press “SHIFT” + “AUDIO“ to select live or playback sounds of the 4 audio channels.

17) “SHIFT” + “SLOW“ :
Under playback mode, press “SHIFT” + “SLOW“ to show slow playback.

18) “SHIFT” + “CH－ “ or “CH＋” :
Press “SHIFT” + “CH－ “ or “CH＋” change the setting in the menu / to select the channel.

19) “SHIFT” + “SET” :

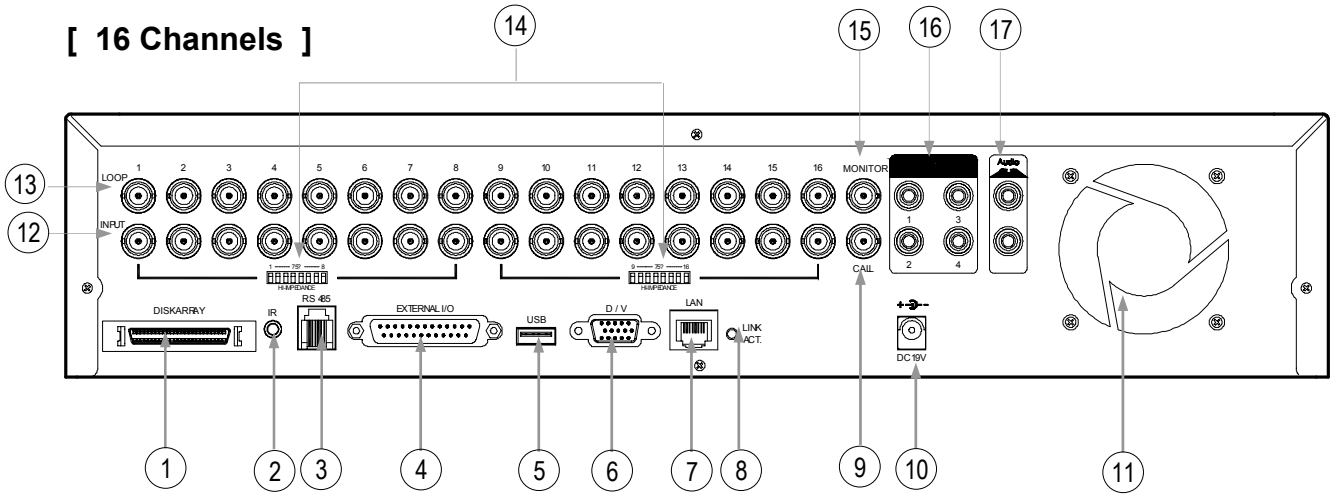
Press “SHIFT” + “SET” to change channel display position.
Press “▲▼◄►” to select the channel which You would like to change,
Press “＋” or “－” select the channel which You would like to show.
Press “ENTER” button to confirm.

20) “SHIFT” + “SEARCH” :
Press “SHIFT” + “SEARCH” buttons to enter the search mode.

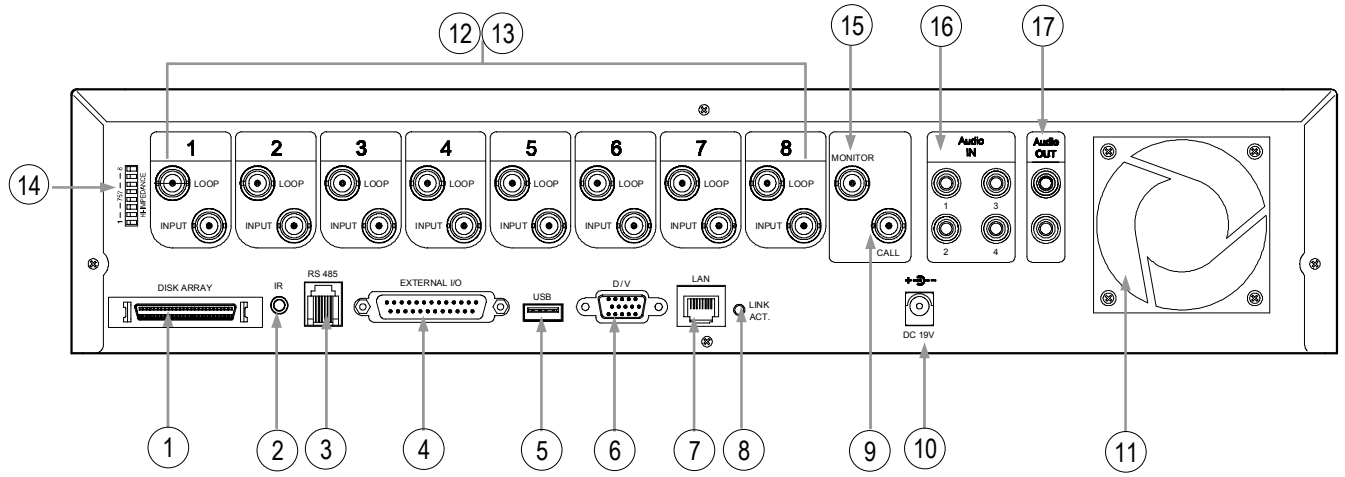
21) “ ◀◀ ” + “ ▶▶ ” :

1.5 REAR PANEL

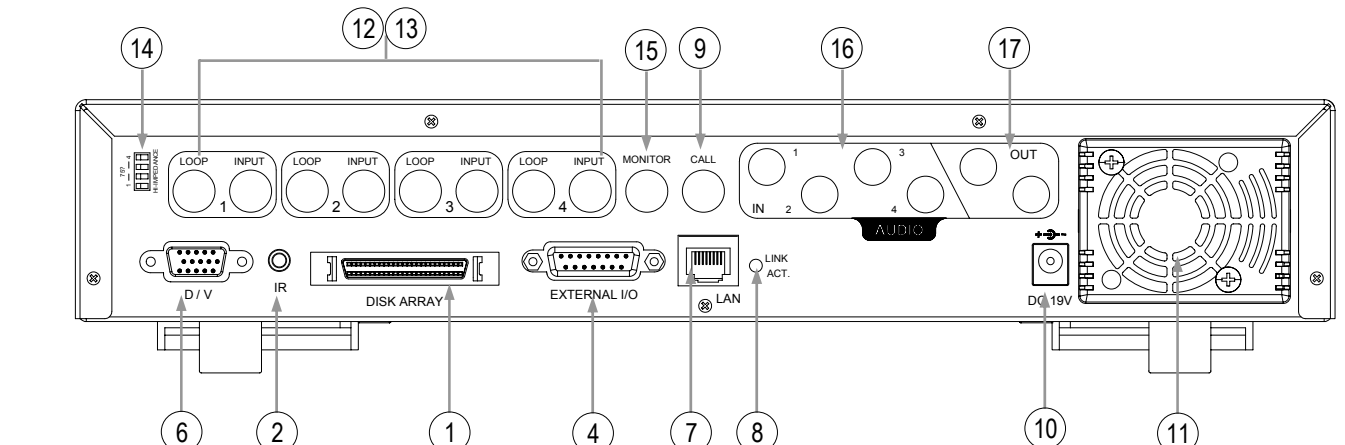
[16 Channels]



[8 Channels]



[4 Channels]



Connect to disk array for extend HDD capacity.

2) IR:
Connect to IR receiver.

3) RS485:
Connect to external device (such as PTZ camera) with RS485-A and RS485-B.

4) EXTERNAL I/O PORT:
Connect to external device. Control external device or controlled remotely by external device (alarm input, external alarm, PTZ camera).

5) USB PORT:
Support firmware update and files backup.

6) D/V PORT (Digital Video Port):
Connect to VGA connector card.

7) LAN:
Connect to Internet by LAN cable.

8) LINK / ACT LED light:
When the Internet is activated, the LED light will turn on.

9) CALL MONITOR:
Connect to CALL monitor. Show the channel switch display. When the alarm is triggered, the call monitor will show the image of the triggered channel for a period of time.

10) POWER:
Connect to provided adapter.

11) FAN:
For ventilation.

12) VIDEO INPUT (CHANNEL 1 – 8 / CHANNEL 1 – 8 / CHANNEL 1 – 4) :
Connect to video source, such as camera.

13) LOOP (CHANNEL 1 – 8 / CHANNEL 1 – 8 / CHANNEL 1 – 4) :
Video output.

14) 75Ω / HI:
When using Loop function, please switch to HI. When you don't use Loop function, please switch to 75Ω.

15) MONITOR:
Connect to Main monitor.

16) AUDIO IN (1-4):
Connect to audio source, such as camera which equipped with audio function.
When users start the recording function, the audio input will be recorded .

17) AUDIO OUT :
Connect to monitor or speaker.

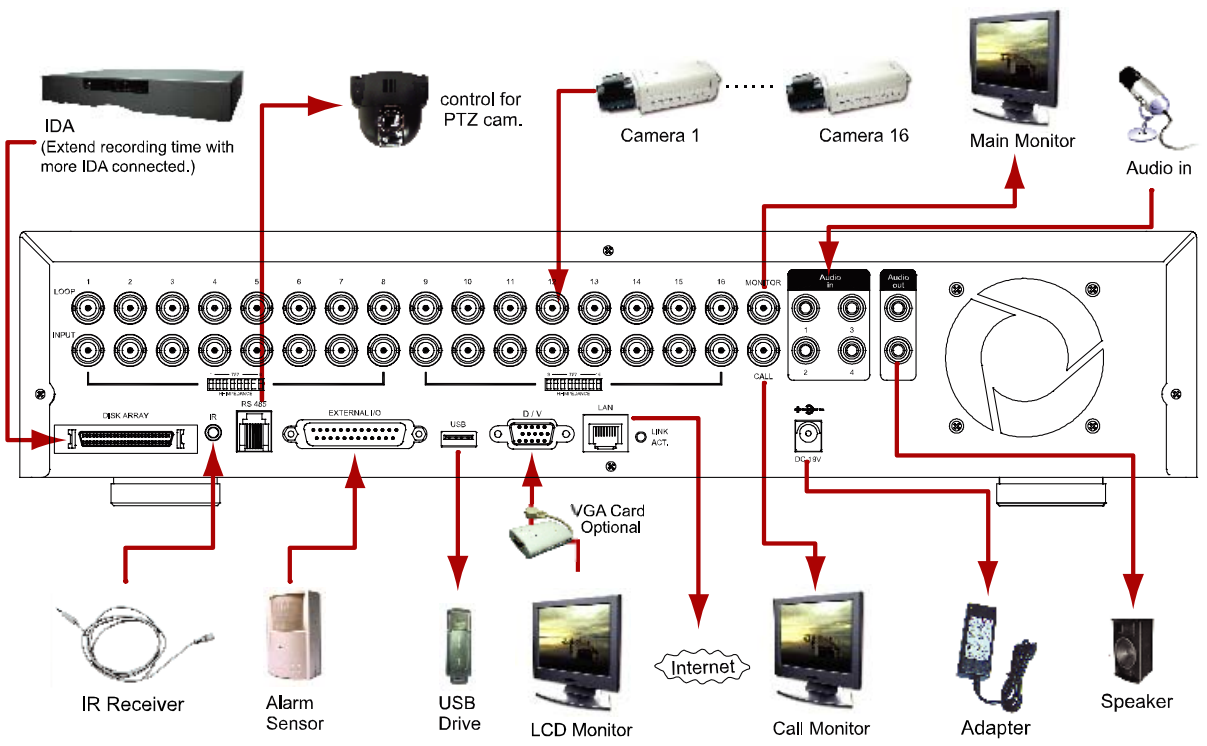
2.1 PHYSICAL CONNECTION

Connecting all the devices to construct a surveillance system, as shown below.

1) Install HDD:
   The HDD must be installed before the DVR is turned on.
2) Connect cameras.
3) Connect monitors.
4) Connect the external devices.
5) Connect power.

NOTE: Please refer to Appendix #1 for HDD installation instructions.
NOTE: Please refer to Appendix#2 for pin configurations of the external I/O port .

[Take 16 Channels as an example]



2.2 GETTING STARTED

1) Before using the DVR, please have the HDD installed ready.
(refer to Appendix #1 for installation of HDD).

2) Connect the AC power cord to power adapter and plug into an electrical outlet.
The standby LED light will turn to red.
Press the “POWER” button. The power LED will be red. It takes approximately 10 to 15 seconds to boot the system with the message : “ SYSTEM INIT... ”, “DETECTING MASTER HDD”, “DETECTING SLAVE HDD DISK A5”, “DETECTING DISKARRAY”, “AUDIO M” and also version information, etc.

3) Before operating the DVR, please set up the system time first.
(for setting system time, please refer to “DATE” settings).

SYSTEM INIT…

DETECTING MASTER HDD OK
DETECTING SLAVE HDD DISK A5 OK
DETECTING DISKARRAY FAIL
AUDIO M OK

VERSION 1030-08-H3-04-V354-07
SYSTEM NTSC
- 787 -

NOTE :

When “HDD not found” message shows up, please refer to appendix # 1. It may result from the improper installation

"Advanced Motion Detection Setting" allows users to adjust different sensitivity factors base on different environment. And "Quick Event Search" allows users to examine the setting of motion detection factors. In this way, users can use specific motion detection setting to capture every important image.

3.1 MOTION DETECTION SETTING

1) LS : The sensitivity of comparing two different images. The smaller the value is, the more sensitive the detection will become.
Application ~
∗ Environment vibration ∗ Light shift
∗ Shadow ∗ Mirror reflection

2) SS : The sensitivity towards the size of the triggered object on the screen. The smaller the value is, the more sensitive the detection will become.
Application ~
∗ Different size of the object on the screen.

3) TS : The sensitivity towards how long the object gets triggered. The smaller the value is, the more sensitive the detection will become.
Application ~
∗ Different speed of the moving object

4) RE : The value of RE is a reference for detection. The default value is 10, which means DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously. Therefore the bigger the value is, the more sensitivity the detection will become.
Application ~
∗ Slow and regular environment change

Scenario : Warehouse

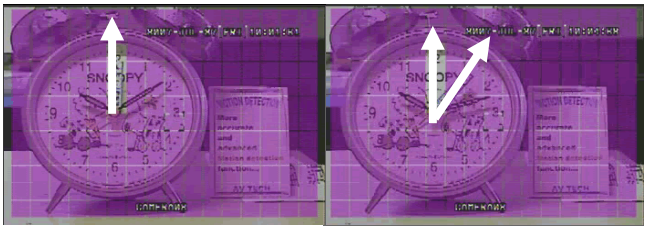
Different environments may require different settings, the sample below is for your reference.

	LS	SS	TS	RE
Entrance	10	2	2	10
Back door	8	1	2	10
Sidewalk	5	2	2	10
Window	12	2	10	10

❖ Note 1 : The real appropriate setting value will depend on the real situation (such as the angle of the lens, the distance between the camera and object…etc.)

When finishing the setup of the motion detection, users could simply use the quick event search to examine the setting. There is a simple example for you to understand the principle.

For example,
Motion detection area: see as the following illustration picture.
Motion detection factors: LS:10; SS:1; TS:3; RE:10; Alarm duration: 5 seconds.



After recording for a period of time, users could use quick event search to playback the motion trigger recording files. In the playback files, users will see the second hand swing between the number “12” and “1” on the clock.

NOTE: For detailed setting, please refer to “Section 6.1 SEARCH”.

BASIC OPERATION

4.1 RECORDING

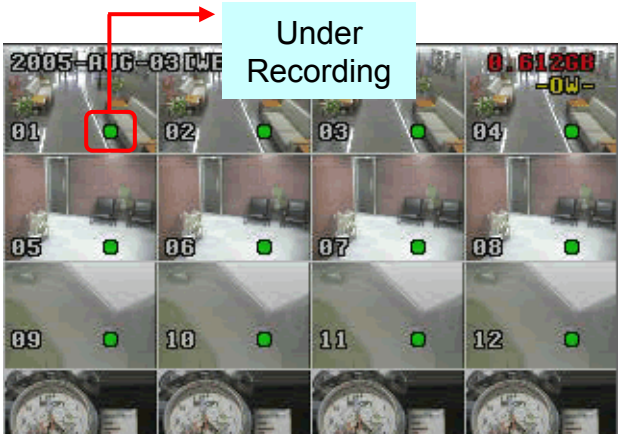
The DVR offers three recording modes, manual record, event recording, and timer record. If power is off accidentally, recorded video files will still be stored in the HDDs. DVR will return to original recording status after power is on again.

1) MANUAL RECORDING (continuous recording) :
Recording is initiated by manually pressing the “REC” button.
Indicated by the sign “●”

2) EVENT RECORDING (triggered by motion and external alarm) :
When this functions is activated,
the recording is triggered by motion or external alarm.
Indicated by the sign “ ” and “ ” .

3) TIMER RECORDING (scheduled time) :
Recording is scheduled by Timer. Indicated by the sign “**TIMER RECORD**”.

NOTE :
When the HDDs are full under O/W recording mode, previous recorded files may be overwritten without further warning notices.



4.2 PLAYBACK

Press " PLAY " button, the DVR will display the last recording video.

1) FAST FORWARD (F.F.) & FAST REWIND (REW):

You can increase speed for fast forward and rewind on the DVR.
In the playback mode,
∗ Press " ▶▶ " once to get 4X speed forward and press twice to get 8X speed,… and the maximum speed can reach 32X.
∗ Press " ◀◀ " once to get 4X speed rewind and press twice to get 8X speed, … and the maximum speed can reach 32X.
∗ The type of recording image size (Frame or CIF)will also shown on the screen.

2) PAUSE / IMAGE JOG:

Press "❚❚ " button to pause the current image displayed on the screen.
In the Pause mode,
∗ Press " ▶▶ " once to get forward by frame change.
∗ Press " ◀◀ " once to get rewind by frame change.

3) STOP:

Press "■ " button under all circumstance, it will return DVR to live monitoring mode.

4) CHANNEL SHIFT:

∗ Display mode:
Press MODE " ▦ " button to select display mode (16 / 9 / 4 channels).

∗ Full Screen Switch:
Press "＋" or "－" button to show the full screen channels.

∗ Channel display switch:
Press " SHIFT " + " SET "button.
Press "▲" "▼" "◄" "►" to select the channel which You would like to change.
Press "＋" or "－" select the channel which You would like show.
Press "ENTER" button to confirm.

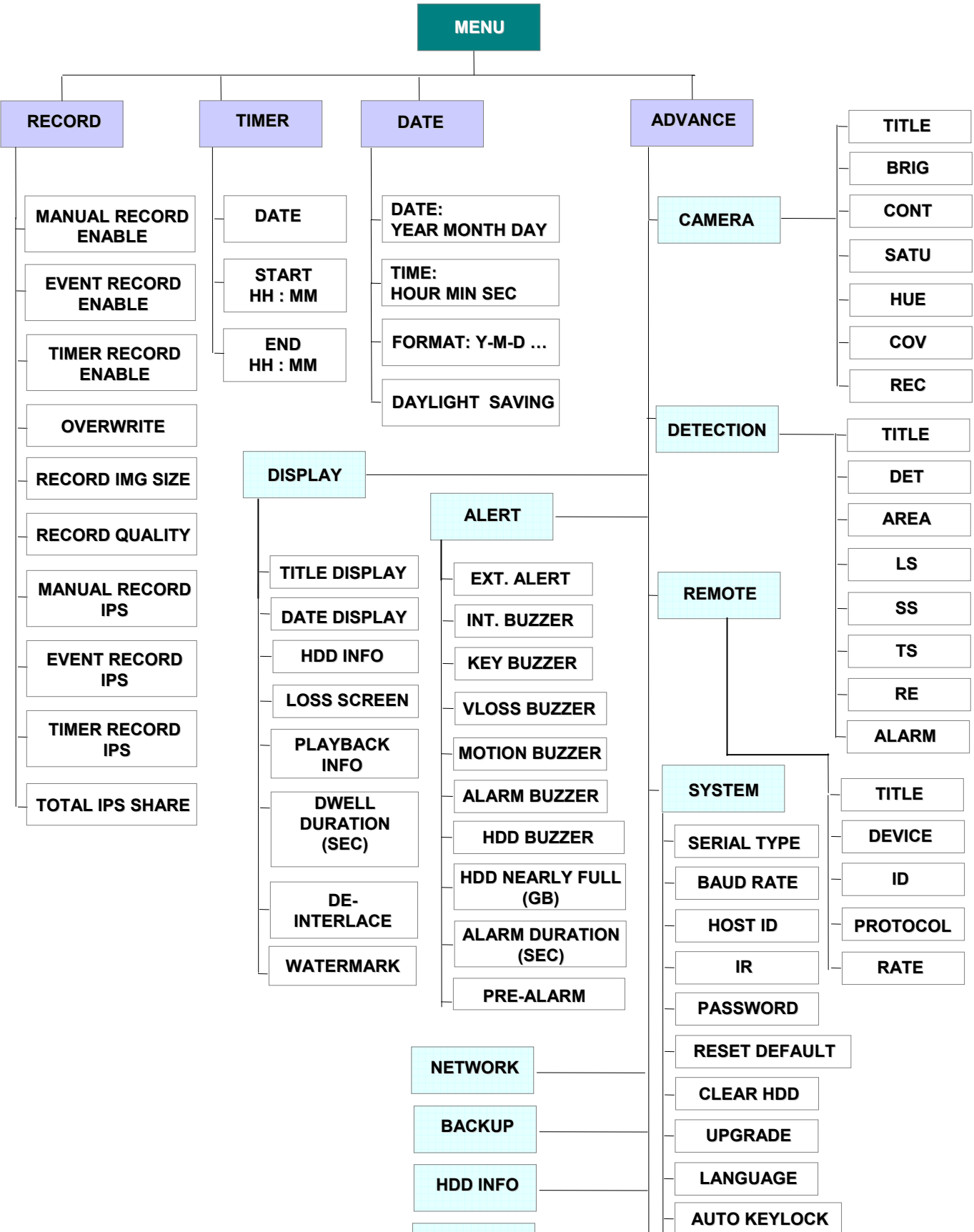
5) SLOW PLAYBACK:

Press " SHIFT " + " SLOW " button to get 1/4X speed playback and press twice to get 1/8X speed, three times to get 1/16X speed, and four times to get 1/32X speed.

6) AUDIO:

Press " SHIFT " + " AUDIO "to select live or playback sounds of the 4 audio channels.
∗ AUDIO 1 (L) ; AUDIO 1 (P)
∗ AUDIO 2 (L) ; AUDIO 2 (P)
∗ AUDIO 3 (L) ; AUDIO 3 (P)
∗ AUDIO 4 (L) ; AUDIO 4 (P)

5.1 MENU TREE


MENU
RECORD
TIMER
DATE
ADVANCE
MANUAL RECORD ENABLE
EVENT RECORD ENABLE
TIMER RECORD ENABLE
OVERWRITE
RECORD IMG SIZE
RECORD QUALITY
MANUAL RECORD IPS
EVENT RECORD IPS
TIMER RECORD IPS
TOTAL IPS SHARE
DATE
START HH : MM
END HH : MM
DATE: YEAR MONTH DAY
TIME: HOUR MIN SEC
FORMAT: Y-M-D ...
DAYLIGHT SAVING
CAMERA
TITLE
BRIG
CONT
SATU
HUE
COV
REC
DETECTION
TITLE
DET
AREA
LS
SS
TS
RE
ALARM
DISPLAY
ALERT
REMOTE
SYSTEM
TITLE DISPLAY
DATE DISPLAY
HDD INFO
LOSS SCREEN
PLAYBACK INFO
DWELL DURATION (SEC)
DE-INTERLACE
WATERMARK
EXT. ALERT
INT. BUZZER
KEY BUZZER
VLOSS BUZZER
MOTION BUZZER
ALARM BUZZER
HDD BUZZER
HDD NEARLY FULL (GB)
ALARM DURATION (SEC)
PRE-ALARM
TITLE
DEVICE
ID
PROTOCOL
RATE
SERIAL TYPE
BAUD RATE
HOST ID
IR
PASSWORD
RESET DEFAULT
CLEAR HDD
UPGRADE
LANGUAGE
AUTO KEYLOCK
NETWORK
BACKUP
HDD INFO

5.2 ACCESS MENU

Press “MENU” button to enter the main menu list. **The default password is 0000.** Enter the default password and press “ENTER”. (Users could alter the password later, please refer to “Section 5.12 ADVANCE MENU_SYSTEM”)

Tip: The default password is “0000”, users could just press “ENTER” four times instead of using “＋” , “－” to select “0” “0” “0” “0”.

(MENU) RECORD TIMER DATE ADVANCE

There are 4 options available in the main menu:

RECORD -------- Record mode setup.

TIMER ---------- Timer recording setup.

DATE ---------- System date setup.

ADVANCE ------- Advance functions setup.

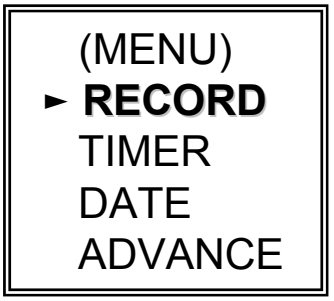
Use the following buttons for menu setting:

“▲▼◄► “ to move the cursor.

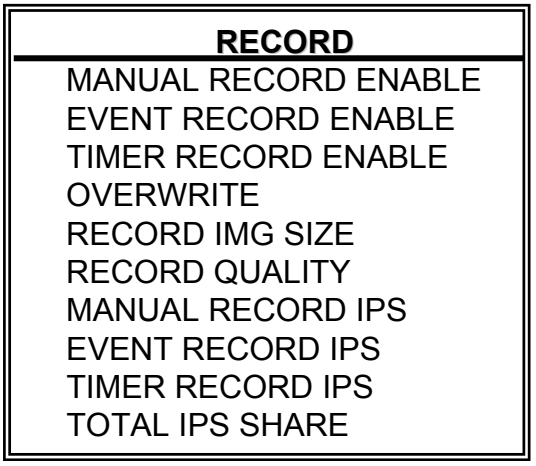
“＋ , －” to choose the numbers / selections.

“ ENTER “ to go to the submenu / to confirm the selection

“ MENU “ to go to the menu OSD
/ to confirm the change / to exit the menu OSD



Move the cursor to the “RECORD”, and press ”ENTER”, then the screen will show the following options.



1) MANUAL RECORD ENABLE:
Start / Stop the manual recording function.

2) EVENT RECORD ENABLE:
Start / Stop the event recording function. When this functions is activated, the recording will triggered by motion or external alarm

3) TIMER RECORD ENABLE:
Start / Stop the timer recording function.

4) OVERWRITE:
Select to overwrite previous recording video in HDD. When the HDD is full under O/W recording mode, previous recorded files will be overwritten without further warning notices.

5) RECORD IMG SIZE:
There are two recording options: FRAME & CIF. When changing record image size, user need to stop recording first.

6) RECORD QUALITY:
There are four quality settings: BEST, HIGH, NORMAL & BASIC

In the following items (7) ~ (10) are taking 16 channels DVR as an example.

7) MANUAL RECORD IPS:
Recording is activated by pressing the “REC” button. Select the images per second of MANUAL RECORD, The options are as the followings:
NTSC: FRAME: 120, 60, 30, 15 PAL: FRAME: 100, 50, 25, 12

images per second of EVENT RECORD, The options are as the followings:

NTSC: FRAME: 120, 60, 30, 15 PAL: FRAME: 100, 50, 25, 12
CIF: 480, 240, 120, 60 CIF: 400, 200, 100, 50

9) TIMER RECORD IPS:

Recording is activated by timer schedule. Select the images per second of TIMER RECORD, The options are as the followings:

NTSC: FRAME: 120, 60, 30, 15 PAL: FRAME: 100, 50, 25, 12
CIF: 480, 240, 120, 60 CIF: 400, 200, 100, 50

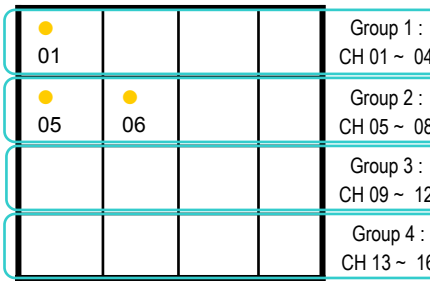
10) TOTAL IPS SHARE:

There are two IPS settings:

FIX: IPS per channel = RECORD IPS ÷ 16 channels

GROUP: Every 4 channels will form a group.
IPS per channel = RECORD IPS ÷ 4 ÷ number of channels under recording within the group.

Ex.: If you set the record IPS as 480 IPS, then
Channel 01 will get 30 IPS (120 / 4 / 1 = 30)
Channel 05 and 06 each will get 15 IPS (120 / 4 / 2 = 15)
" ● " means under recording



NOTE: When users choose the image size as "CIF", the total IPS share will be fixed. That is IPS per channel will equal to record IPS divided by 16 channels.

5.4 MAIN MENU OPTIONS___TIMER

(MENU)
RECORD
► **TIMER**
DATE
ADVANCE

Move the cursor to the "TIMER", and press "ENTER", then the screen will show the following options.

TIMER

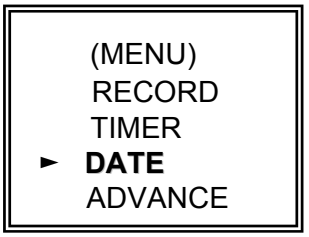
DATE	HH : MM	HH : MM
OFF	00 : 00	00 : 00
DAILY	08 : 00	18 : 00
SUN	06 : 00	23 : 00
MON-FRI	00 : 00	00 : 00
OFF	00 : 00	00 : 00
OFF	00 : 00	00 : 00
OFF	00 : 00	00 : 00

SAT-SUN / DAILY/OFF) could be set to activate the timer recording.
NOTE 1 : Specific date could be changed by "＋" or "－" button.
NOTE 2 : If you plan to set the timer recording across the midnight, there are two ways for setting the timer recording schedule, please following the instructions below.
Example 1 : If you only want to set recording timer schedule from every Sunday 23:30 to Monday 23:30, then you could set recording timer schedule as Sunday from 23:30 to 23:30.
Example 2 : If you plan to set the timer recording from Sunday 08:00 to Monday 15:00, then you could set the recording timer schedule as Sunday from 08 : 00 to 00 : 00, and Monday 00 : 00 to 15 : 00.

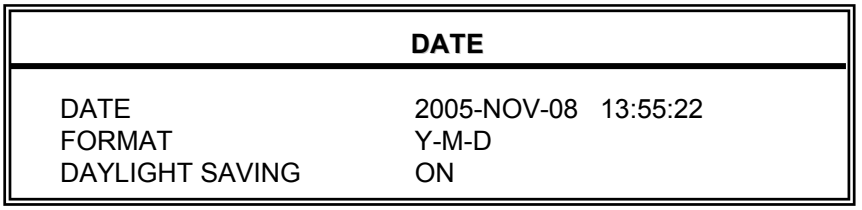
2) START HH / MM:
Select the start time for the recording.

3) END HH / MM:
Select the finishing time for the recording.

5.5 MAIN MENU OPTIONS___DATE



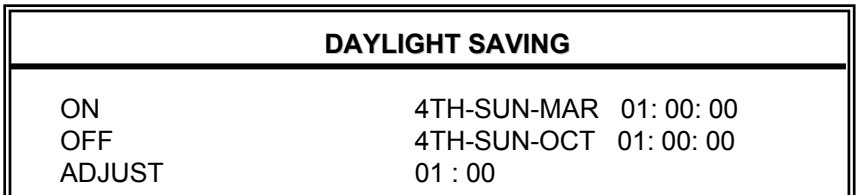
Move the cursor to the "DATE", and press "ENTER", then the screen will show the following options.



1) DATE:
Set the correct time of the DVR (YEAR / MONTH / DAY / HOUR / MIN / SEC)

2) FORMAT:
There are three date formats: Y-M-D, M-D-Y, D-M-Y.

3) DAYLIGHT SAVING:
Specify whether to use daylight saving time and time period. (ON / OFF)
Daylight saving time can be adjusted manually.
Enter the daylight saving menu mode to set start time, end time and adjust hour of the daylight saving.



5.6 MAIN MENU OPTIONS___ADVANCE

(MENU)
RECORD
TIMER
DATE
►**ADVANCE**

Move the cursor to the “ADVANCE”, and press ”ENTER”, then the screen will show the following options.

ADVANCE

CAMERA
DETECTION
DISPLAY
ALERT
REMOTE
SYSTEM
NETWORK
BACKUP
HDD INFO
EVENT LOG

5.7 ADVANCE MENU ___CAMERA

Move the cursor to the “CAMERA”, and press ”ENTER”, then the screen will show the following options.

CAMERA

TITLE	BRIG	CONT	SATU	HUE	COV	REC
01	110	128	128	128	NO	YES
02	110	128	128	128	NO	YES
03	110	128	128	128	NO	YES
04	110	128	128	128	NO	YES
05	110	128	128	128	NO	YES
06	110	128	128	128	NO	YES
07	110	128	128	128	NO	YES
08	110	128	128	128	NO	YES
PRE	NEXT					

access the setting screen. Assign each channel a title (up to six characters (letters or symbols…)), the default title is the channel number.

2) BRIG / CONT / SATU / HUE:
Adjust the Brightness/Contrast/Saturation/Hue of each channel.
The level is from 0 to 255. The default value of BRIG is 110, others are128.

3) COV (COVERT):
Select “YES” to mask the selected channel which is under recording.
When this function is activated, the “COV” words will shown on the screen.

4) REC (RECORD):
Select “YES” to enable the record function; Select “NO” to disable the record function.

5) PRE / NEXT:
Select “PRE” to go to the previous page; Select “NEXT” to go the next page.

NOTE:
TITLE : 6 characters (letters or symbols…).
BRIG : from 0 ~ 255, the default value is 110.
CONT : from 0 ~ 255, the default value is 128.
SATU : from 0 ~ 255, the default value is 128.
HUE : from 0 ~ 255, the default value is 128.
CONV : YES or NO.
REC : YES or NO.

5.8 ADVANCE MENU ___DETECTION

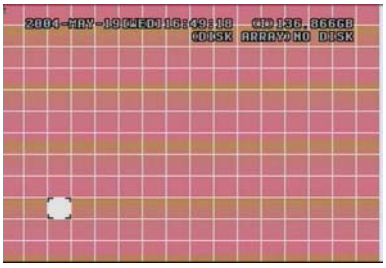
Move the cursor to the “DETECTION”, and press ”ENTER”, then the screen will show the following options.

DETECTION							
TITLE	DET	AREA	LS	SS	TS	RE	ALARM
01	ON	SETUP	07	03	02	10	OFF
02	ON	SETUP	07	03	02	10	LOW
03	ON	SETUP	07	03	02	10	HIGH
04	ON	SETUP	07	03	02	10	OFF
05	ON	SETUP	07	03	02	10	OFF
06	ON	SETUP	07	03	02	10	OFF
07	ON	SETUP	07	03	02	10	OFF
08	ON	SETUP	07	03	02	10	OFF
PRE	NEXT						

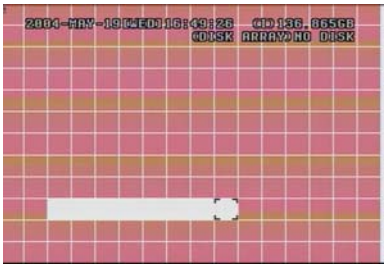
Show the title of each channel of the camera.

2) DET:
Select “ON” to activate the motion detect function of each channel.
Select “OFF” to inactivate the motion detect function of each channel.

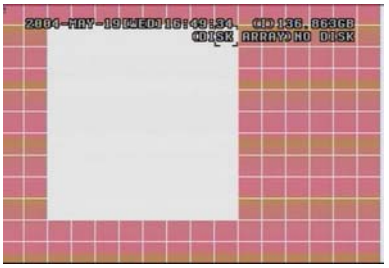
3) AREA:
Press the “ENTER” button to set detection area.
Pink blocks represent the area that is not being detected. While the transparent blocks is the area that is under detection.



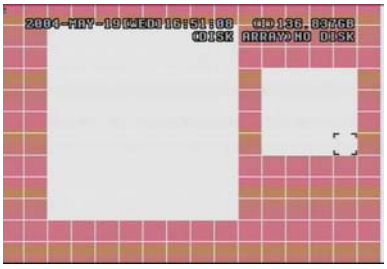
Press “ENTER” to confirm the start area



Press ◄ or ► to choose the width of the area

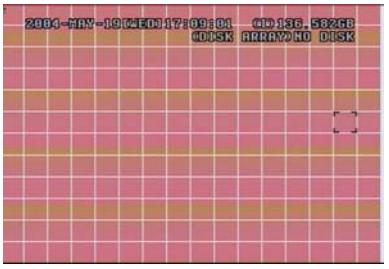


Press ◄ or ► to choose the height of the area, and press “ENTER” again to confirm.



Multi-detected area

Press “－” to turn all area under detection



Press “＋” to turn all area not to be detected

▲▼◄►: navigates between targets.

4) LS :
The sensitivity of comparing two different images. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, the lowest sensitivity setting is 15.
The default value is 07.

5) SS :
The sensitivity towards the size of the triggered object on the screen.(the number of motion detection grids). The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15. The default setting is 03.

Note: The default setting of Spatial Sensitivity is 03, which means when 3 grids are detected for motion at one time, the system will get triggered. So the

The sensitivity towards how long the object gets triggered. The smaller the value is, the higher sensitivity for motion detection.
The highest sensitivity setting is 00, and the lowest sensitivity setting is 15.
The default setting is 02.

7) RE :
The value of RE is a reference for detection. The default value is 10, which means DVR will compare 10 continuous images at one time according to the sensitivity of LS, SS, TS simultaneously. Therefore the bigger the value is, the higher sensitivity for motion detection.

8) ALARM:
Select LOW / HIGH for the alarm polarity. The default alarm value is OFF.

9) PRE / NEXT:
Select “PRE” to go to the previous page; Select “NEXT” to go the next page.
Targets set in the AREA.

5.9 ADVANCE MENU ___DISPLAY

Move the cursor to the “DISPLAY”, and press ”ENTER”, then the screen will show the following options.

DISPLAY	
TITLE DISPLAY	ON
DATE DISPLAY	ON
HDD INFO	ON
LOSS SCREEN	BLUE
PLAYBACK INFO	NORMAL
DWELL DURATION (SEC)	2
DE-INTERLACE	ON
WATERMARK	ON

1) TITLE DISPLAY:
Turn the channel title display on / off.

2) DATE DISPLAY:
Turn the date display on / off.

3) HDD INFO”
Turn the display information of internal HDD on / off.

4) LOSS SCREEN”
Set the color of video loss screen (Blue or Black)

5) PLAYBACK INFO:
Set the position where playback information will be indicated (center or normal (on the button of left-hand side of the screen)).

7) DE-INTERLACE:
Set the “DE-INTERLACE” function on / off.

8) WATERMARK:
Select watermark function on / off.
If users activate the watermark function, then when playback the backup file in the software AP, users could proof the authenticity of the recorded video.
Please refer to P. 35 for detailed instruction.

5.10 ADVANCE MENU ___ALERT

Move the cursor to the “ALERT”, and press ”ENTER”, then the screen will show the following options.

ALERT	
EXT. ALERT	ON
INT. BUZZER	ON
KEY BUZZER	ON
VLOSS BUZZER	ON
MOTION BUZZER	ON
ALARM BUZZER	ON
HDD BUZZER	ON
HDD NEARLY FULL (GB)	05
ALARM DURATION (SEC)	05
PRE-ALARM	ON

1) EXT. ALERT:
Set the sound on / off when external alarm is triggered.

2) INT. BUZZER:
Set the sound of KEY / VLOSS / MOTION / ALARM / HDD FULL on or off.

3) KEY BUZZER:
Set the sound on / off when pressing the button.

4) VLOSS BUZZER:
Set the sound on / off when video loss happened.

5) MOTION BUZZER:
Set the sound on / off when motion alarm triggered.

6) ALARM BUZZER:
Set the sound on / off when internal alarm triggered.

7) HDD BUZZER:
Set the sound on / off when the HDD is full.

8) HDD NEARLYFULL (GB):
If HDD buzzer is on, you could choose to have a buzzer notification when the HDD available capacity is only xxx GB left.

Press “ENTER” or “＋” or “－” button to set the duration time of alarm recording (5, 10, 20, 40 sec.).

10) PRE-ALARM:
Set the pre-alarm function on (8MB) / off.
When pre-alarm and event record functions are activated, the DVR will record 8MB file before alarm / motion triggered.

5.11 ADVANCE MENU ___REMOTE

Move the cursor to “REMOTE”, and press ”ENTER”, then the screen will show the following options.

REMOTE

TITLE	DEVICE	ID	PROTOCOL	RATE
01	PTZ	001	P - D	02400
02	CAMERA	002	NORMAL	02400
03	CAMERA	003	NORMAL	02400
04	CAMERA	004	NORMAL	02400
05	CAMERA	005	NORMAL	02400
06	CAMERA	006	NORMAL	02400
07	CAMERA	007	NORMAL	02400
08	CAMERA	008	NORMAL	02400
PRE	NEXT			

1) TITLE:
Title of each camera.

2) DEVICE:
Select to control normal camera or PTZ camera for each channel.

3) ID:
Set the ID number (0 ~ 255) as same as the ID of each device.

4) PROTOCOL:
Select NORMAL (our protocol) or PELCO-D protocol.

5) RATE:
Set the baud rate of each channel (2400, 4800, 9600, 19200, 57600).

PTZ Control:

1) Device: Our own brand PTZ / Pelco-D protocol PTZ

2) Connection: Refer to rear panel / Refer to PIN configuration

3) Control Mode: Refer to front panel / Refer to IR remote control manual

Move the cursor to the “SYSTEM”, and press ”ENTER”, then the screen will show the following options.

SYSTEM	
SERIAL TYPE	RS - 485
BAUD RATE	02400
HOST ID	003
IR	ON
PASSWORD	0000
RESET DEFAULT	RESET
CLEAR HDD	MASTER
UPGRADE	NO
AUTO KEYLOCK	NEVER
LANGUAGE	ENGLISH
VERSION	1030-08-H3-04-V354-07
VIDEO FORMAT	NTSC

1) SERIAL TYPE:
Press “ENTER” or “＋” or “－” button to set the control serial type (RS-485, RS-232) of DVR.

2) BAUD RATE:
Press “ENTER” or “＋” or “－” button to set the BAUD RATE of DVR (2400, 9600, 19200, 57600).

3) HOST ID:
Press “ENTER” or “＋” or “－” button to set the ID of DVR (0 ~ 255).

4) IR:
Press “ENTER” or “＋” or “－” button to set the IR function on / off.

5) PASSWORD:
Press “ENTER” or “＋” or “－” button to set the password for accessing DVR.

6) RESET DEFAULT:
Press “ENTER”, and select “YES” to confirm or “NO” to chancel.

7) CLEAR HDD:
Press “ENTER”, and “YES” to confirm clear HDD or “NO” to chancel.
In this function, you can press “＋” or “－” to select the HDD MASTER HDD, SLAVE HDD or DISK ARRAY which you plan to clear.

8) UPGRADE:
Press “ENTER”, and select “YES” to confirm upgrade or “NO” to chancel.

9) AUTO KEYLOCK:
Set the auto key lock function (Never / 10 sec / 30 sec / 60 sec).

10) LANGUAGE:
Press “ENTER”, and select the language of the OSD.

11) VERSION:
The firmware version information will be shown on the screen.

5.13 ADVANCE MENU ___NETWORK

Move the cursor to the “NETWORK”, and press ”ENTER”, then the screen will show the following options.

NETWORK	
NETWORK TYPE	STATIC
DNS	168. 95. 1. 1
PORT	0 0 8 0

1) NETWORK TYPE (STATIC):

Select NETWORK TYPE, and press “＋” or “－” button to set the network type as STATIC, and then press “ENTER” to go to the submenu of the network. In the submenu of network type, use “＋” or “－” button to set all the information needed in the DVR. See the illustration below.

STATIC	
IP	60. 121. 46. 236
GATEWAY	60. 121. 46. 226
NETMASK	255. 255. 255. 254

2) NETWORK TYPE (DHCP):

This DHCP function need to be supported by router or cable modem network with DHCP service. For detailed DHCP setting, please refer to P.36 and P.37 (Licensed Software AP).

3) NETWORK TYPE (PPPoE):

This PPPoE function need to have “username” and “password” from ISP supplier. For detailed PPPoE setting, please refer to P.36 and P.37 (Licensed Software AP).

NOTE:

DHCP and PPPoE network types need to apply DDNS service to get “Hostname” to correspond to dynamic IP address. For detailed DDNS setting, please refer to P.37.

5.14 ADVANCE MENU ___ BACKUP

Move the cursor to the “BACKUP”, and press ”ENTER”, then the screen will show the following options.

BACKUP
USB BACKUP
DISK BACKUP

Select “DSIK BACKUP” and then press “Enter”.

DISK BACKUP	
START TIME	2005-11-30 15 : 30 : 00
END TIME	2005-12-01 16 : 00 : 00
AVAILABLE SIZE	4083 MB
CHANNEL	01
HDD NUM	MASTER
BACKUP TO DISK	START

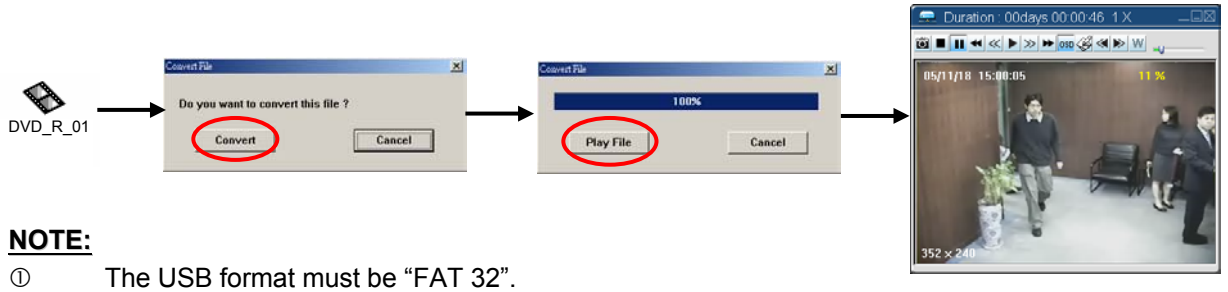
1) Press “＋” and “－” buttons to open the **DVD / CD WRITER**.
Put the **DISK** into **DVD / CD WRITER**, and press “＋” and “－” buttons again to close.
(NOTE: Use DVD-R DISK only)

2) Go to “DISK BACKUP” menu and set the start time, end time, channel and HDD number.

3) After setting up the backup information,
move the cursor to “START”, and press “ENTER”.
While the files are backup to **DISK**, users will see the backup completed percentage shown on the screen.

4) After backup files to **DISK**, “DISK BURN FINISH” will shown on the screen.
Press “＋” and “－” to take out the **DISK** from **DVD / CD WRITER**.

5) Put **DISK** into the **DVD / CD -ROM** of PC.
(O/S system: Windows XP, and Windows2000).
And then double click the file → Covert the file → Play the backup file at PC Side.



NOTE:

① The USB format must be “FAT 32”.

② If the USB is not supported by the DVR, then the “USB ERROR” message will be shown on the screen.

5.15 ADVANCE MENU ___HDD INFO

You can get all the capacity information of the connected HDD.

HDD INFO

HDD NUM	HDD SIZE	HDD NUM	HDD SIZE
MASTER	400.517	SLAVE	NO HDD
EXT 001	400.517	EXT 002	400.517
EXT 003	400.517	EXT 004	NO HDD
EXT 005	NO HDD	EXT 006	NO HDD
EXT 007	NO HDD	EXT 008	NO HDD
EXT 009	NO HDD	EXT 010	NO HDD
EXT 011	NO HDD	EXT 012	NO HDD

5.16 ADVANCE MENU ___EVENT LOG

You can get all the information (event type, time, and channel) of the event list (including video loss list, net list, other lists (such as power on / off, key unlock, reset to default). Select the event list you want to see and press “ENTER”.

EVENT LOG

VLOSS	LIST
NET	LIST
OTHERS	
CLEAR	ALL

1) VLOSS LIST:
   Show the information of video loss list.

2) NET LIST:
   Show the information of net login list.

3) OTHERS:
   Show the information of power on / off, unlock, reset to default list.

4) CLEAR ALL:

6.1 SEARCH

Press "SHIFT" + "SEARCH" buttons on the front panel of the DVR to enter the search mode. Then the screen will show the following options.

SEARCH	
HDD	MASTER
FULL	LIST
RECORD	LIST
SYSTEM	LIST
ALARM	LIST
MOTION	LIST
EVENT	SEARCH
TIME	SEARCH

1) HDD:
Select the the specific HDD.

2) FULL LIST:
List all recorded files
(R: RECORD / S: SYSTEM / A: ALARM / MS: MOTION / T: TIMER).

3) RECORD LIST:
List of manual recorded files.

4) SYSTEM LIST:
List of system recorded files.
Under continuous recording mode, the DVR system will save one recording file every one hour.

5) ALARM LIST:
List of alarm trigger recorded files.

6) MOTION LIST:
List of motion trigger recorded files.

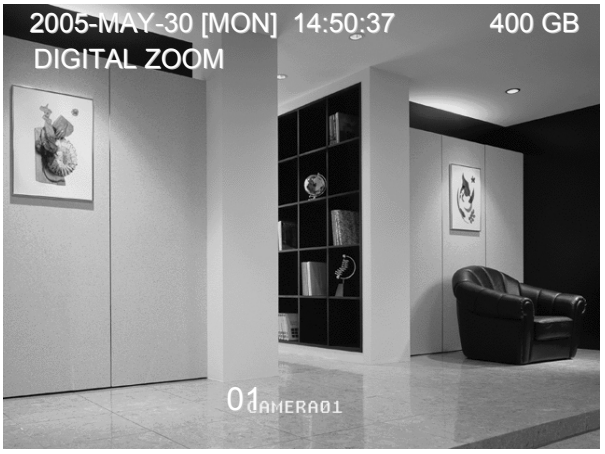
7) EVENT SEARCH:
Search by specific time period (YEAR / MONTH / DAY / HOUR / MIN / CHANNEL).
Display all the motion triggered recording videos.
When you saw the playback of the motion triggered recording videos, it would play with fast speed.

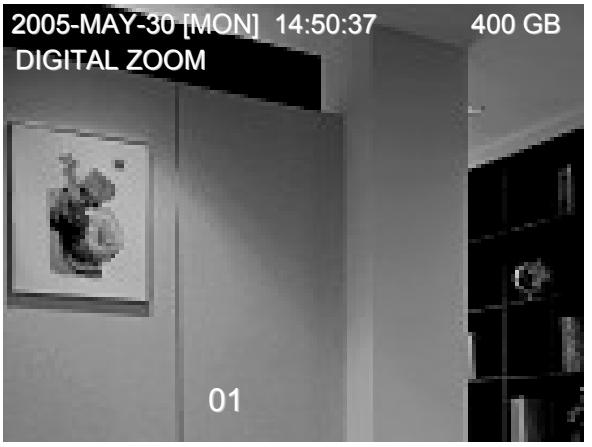
8) TIME SEARCH:
Search by specific time period (YEAR / MONTH / DAY / HOUR / MIN).

NOTE:
Move the cursor to the specific recorded file and press "ENTER" to play the video

6.2 2X DIGITAL ZOOM

Press “ZOOM” button on the front panel of the DVR to enlarge the picture of selected channel (2X digital zoom). You will have ¼ view size of the enlarged picture. Therefore use the “ ▲▼◄► “ to navigate.





1) Press the “ZOOM” button again to exit the zoom picture.
2) Press “ ▲▼◄► “ button to move the zoom position.
3) Users could also press the “Digital Zoom” button on the IR remote control panel.

6.3 KEY LOCK

1) Key Lock On:
   ① Press “MENU” + “ENTER” buttons to key lock.
   ② Auto key lock: refer to “Section 5.12 ADVANCE MENU_SYSTEM”.
2) Key Lock Off:
   Press any key (except “SHIFT” and “POWER” buttons) and then key in the password to exit Key Lock mode.
3) Password:
   As to the password setting, please refer to “Section 5.12 ADVANCE MENU_SYSTEM”.

6.4 SWITCH THE N/P SYSTEM

1) Press “POWER” button to shutdown, and then press “POWER” + “►“ to switch to PAL system.
   (Press till the monitor show the video image of the DVR.)
2) Press “POWER” button to shutdown, and then press “POWER” + “◄“ to

6.5 USB UPGRADE

Users can use USB for upgrade. Please format the USB memory device first.

1) Get the upgrade files from your distributor.
2) Save the upgrade files in your USB device (Do not change the file name).
3) Go to the “MAIN MENU – SYSTEM - UPGRADE” , and press “ENTER”.
4) Select “YES”, and press “ENTER” again to confirm upgrade.

1 **WARNING** UPGRADE ARE YOU SURE? YES NO	2 **WARNING** PLEASE WAIT… UPGRADE KERNEL OK	3 **WARNING** PLEASE WAIT… UPGRADE BOOT OK
4 **WARNING** PLEASE WAIT… UPGRADE HTML OK	5 **WARNING** UPGRADE SUCCESS REBOOT OK	6 **WARNING** SHUTDOWN PLEASE WAIT… OK

NOTE:

① The USB format must be “FAT 32”.

② If the USB is not supported by the DVR, then the “USB ERROR” message will be shown on the screen.

6.6 LICENSED SOFTWARE AP

1) <u>Install the Software</u>:

① Put the attached CD into a CD-ROM and it will start to install application program into PC.

② The PC will auto run the setup file.

③ After setup, user will see “

“ icon on the desktop.

2) Software Operation:

① Connect DVR with PC via RJ45 network line.

② LAN Setting :
The default DVR IP is “192.168.1.10”, and default “username” and “password” are both “admin”. Users should set PC IP address as “IP:192.168.1.***XXX*** (1~255, except 10)” (in order to let the PC and DVR under the same domain).

③ Click twice to enter login page.
Key in IP (192.168.1.10), username (admin), password (admin) into the login page. After connect to the DVR with local LAN, users could modify the network setting in DVR or in system config of the licensed software AP.

④ Network Type ~ Static IP :
Set the network information in the DVR menu (Section 5.13) or in System Config of the licensed software AP (P.36).

Network Type ~ Dynamic IP (DHCP and PPPoE) :
Set the Network information in System Config of the licensed software AP. For detailed DHCP and PPPoE setting, please refer to P.36 and P.37.

⑤ After setup the network information, click twice to enter login page.
Key in “Username”, “ Password”, and “IP” (Static IP) or “Host name” (Dynamic IP). And then click the green button to connect.

⑥ LOGIN AP Icon Explanation.

Address Book: You can press this button to add a new IP into the IP Address Book or choose any preset IP address to access the Video Server.

Search: Search available DVR IP address in local area network and modify the network setting of the DVR.

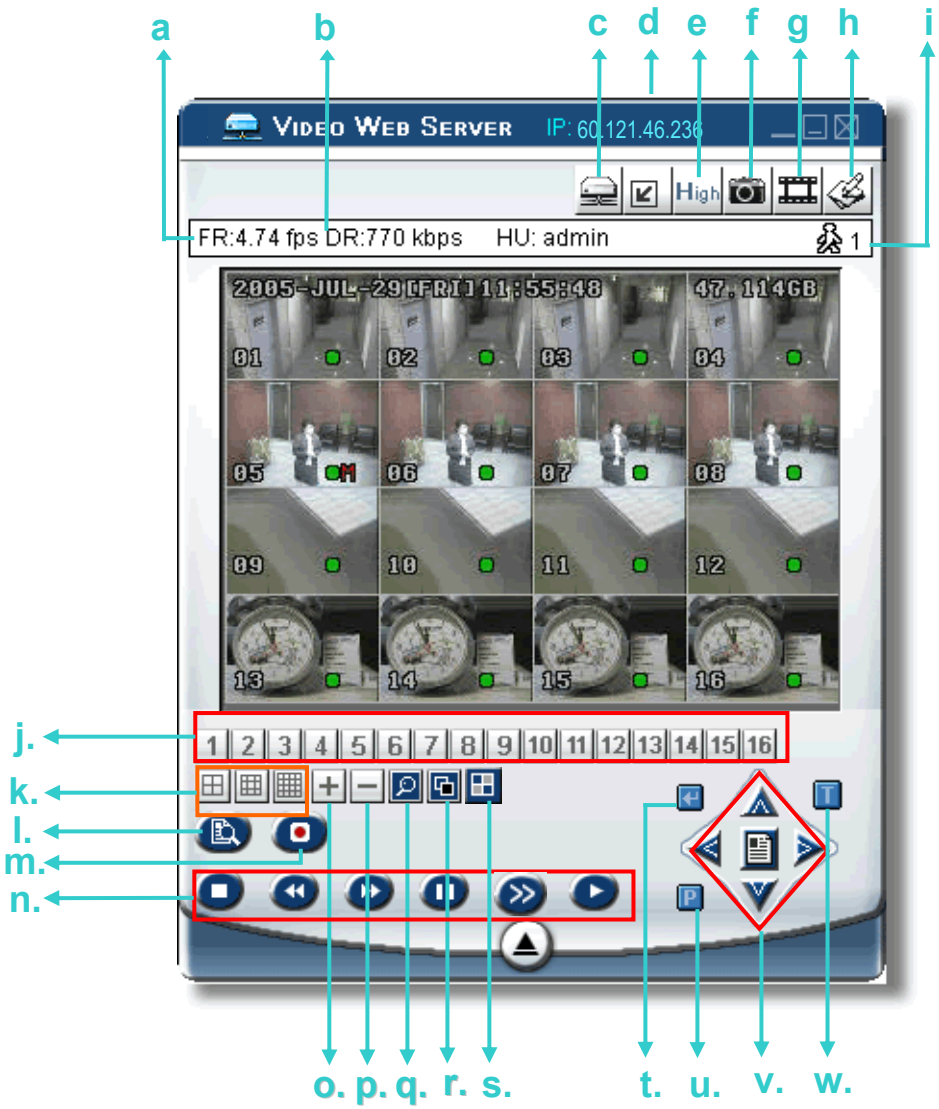
Player: You can press this button to access and play the recorded files saved in your PC.

Copy: You can press this button to copy all the software installation files, so you could keep all the settings of video web server for next software installation on other PC.

NOTE: The version of the licensed software will shown on the login page.

⑦ Introduction of Basic Operation : Video Web Server Control Panel.

Digital Device Control Panel ~ 16CH DVR



a. Image Transfer Rate Per Second

b. Data Transfer Rate

c. Connect / Disconnect

d. Resolution:
NTSC: 320 × 228 ; 640 × 456
PAL: 320 × 276 ; 640 × 552

e. Image Quality (High, Medium, Low)

f. Snapshot : press this button to have a snapshot of the image which will be saved in the designated destination.

g. Record : press this button, the video web server will start to record, and press this button again to stop record. The recording files will be saved to PC. Each recording file can up to 18,000 frames. When the recording file capacity is full, the new recorded file will be saved to the second file. Besides, if the HDD space is less than 200MB, the program will stop recording.

h. System Config: press this button to enter the setting page of the video web server.

i. Number of Online Users

j. CH 1 ~ 16

k. 4, 9, 16 Channel Display

l. Search

m. Record

n. Stop / Fast Rewind / Fast Forward / Pause / Slow Playback / Play

o. ＋

p. －

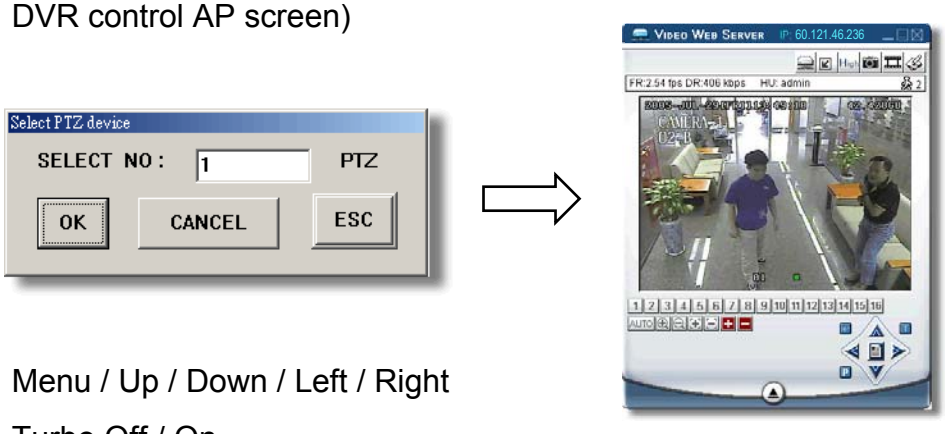
q. Digital Zoom

r. Set : press this button to change channel display position.
Press "▲▼◄► " to select the channel which You would like to change.
Press "＋" or "－" select the channel which You would like to show.
Press "Enter" button to confirm.

s. Sequence: press this button to enter the call monitor function and press again to exit from call monitor mode.

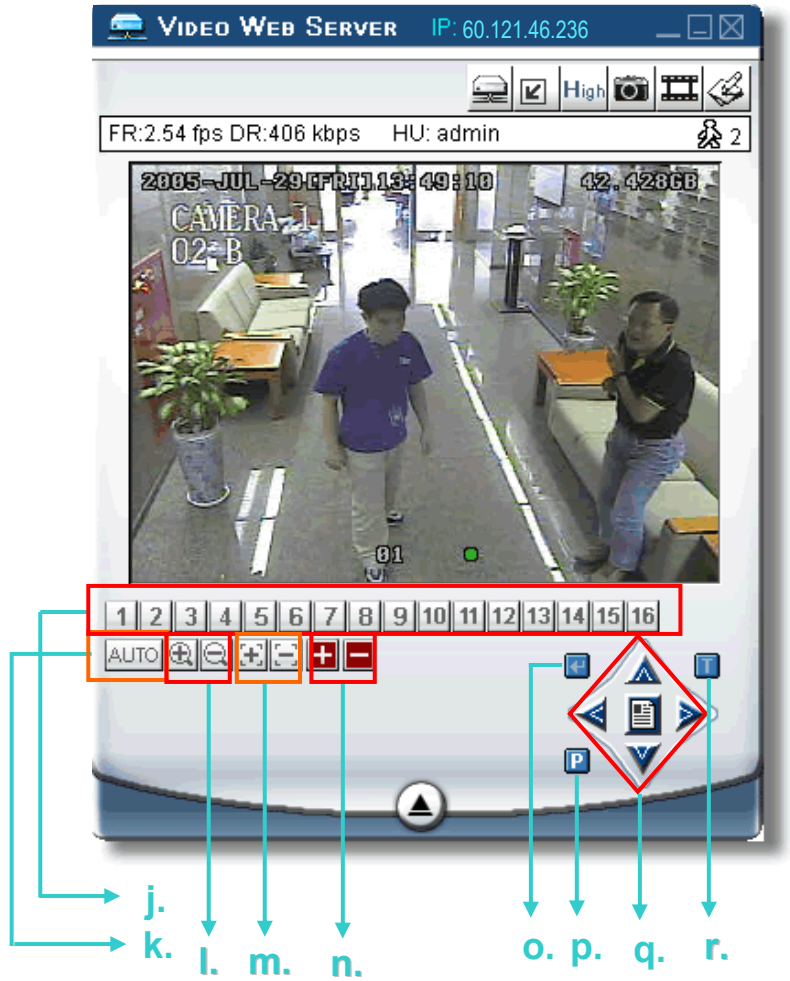
t. Enter

u. PTZ Control Off / On:
When you turn the PTZ control on, then you could select the PTZ device, and press "OK" button to enter the PTZ control AP screen. (Press "ESC" to exit from PTZ control AP screen and back to DVR control AP screen)



v. Menu / Up / Down / Left / Right

w. Turbo Off / On



j. Preset 1 ~ 16

k. AUTO

l. Zoom Tele Zoom Wide

m. Focus Near Focus Far

n. Max Zoom In Max Zoom Out

o. Enter

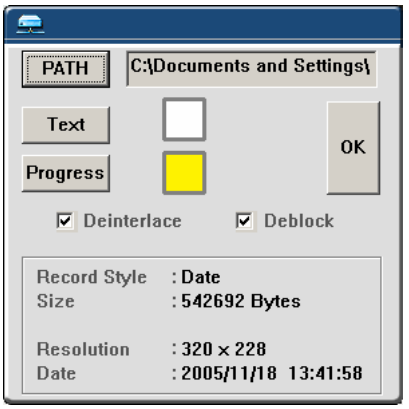
p. PTZ Control Off / On:
When you turn the PTZ control on, then you could select the PTZ device, and press “OK” button to enter the PTZ control AP screen. (Press “ESC” to exit from PTZ control AP screen and back to DVR control AP screen)

q. Menu / Up / Down / Left / Right

r. Turbo ON/ OFF:
To speed up menu selecting or the control of the PTZ camera under video web server, you can activate "Turbo" function by clicking this button. Users are allowed to change the turbo steps from 1 to 10. .
Ex. If you activate the TURBO function, and set the value of the turbo step as 3, then when you press one of the button up/down/left/right, one mouse click will function as if you click 3 times.

⑧ Playback Operation

a. b. c. d. e. f. g. h. i. j. k. l.



a. Snapshot
b. Stop
c. Pause
d. Fast Rewind (1X, 2X, 4X, 8X, 16X)
e. Slow Rewind (1X, 1/2X, 1/4X, 1/8X, 1/16X)
f. PLAY (1X)
g. Slow Playback (1X, 1/2X, 1/4X, 1/8X, 1/16X)
h. Fast Forward (1X, 2X, 4X, 8X, 16X)
i. OSD (show / hide)
j. Config. Setting (File path for snapshot, text color, progress color)
k. Open Previous File
l. Open Next File

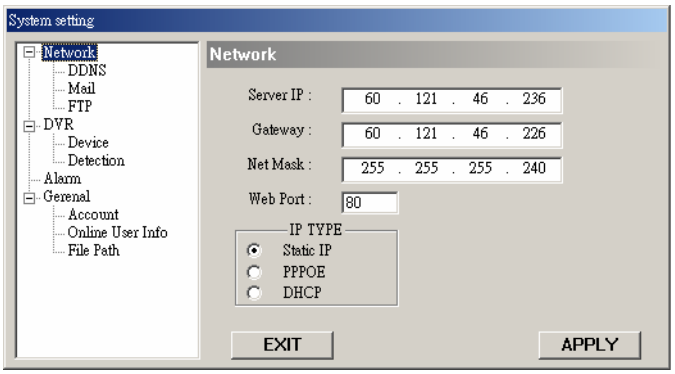
Note:

- When users pause the playback picture, users could press “d” button to go to the previous image, or press “h” button to go to the next image.
- If “watermark” function on the DVR side is turned on before recording, then in the playback mode of the software AP, users could press ” W “ button to check the authenticity of the **BACKUP VIDEO**. If the **BACKUP VIDEO** had been altered, the video image will turn to light red and the playback will be paused.

- ❑ Press “System Config ” button to enter the system setting page.
- ❑ In this system setting page, you can select the function which you want to set up.
- ❑ After setting, please press “APPLY” button to save the settings.
- ❑ System setting includes:
  Network, DDNS, Account, Online User, Alarm, Mail, FTP, Alarm Database, File Path, Device, Detection, Camera, and Toolbox.

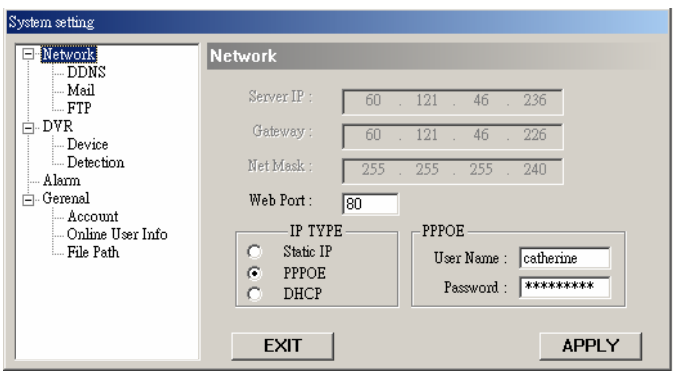
Network

Click on Network setting, and choose the IP TYPE (Static IP, PPPoE, DHCP)

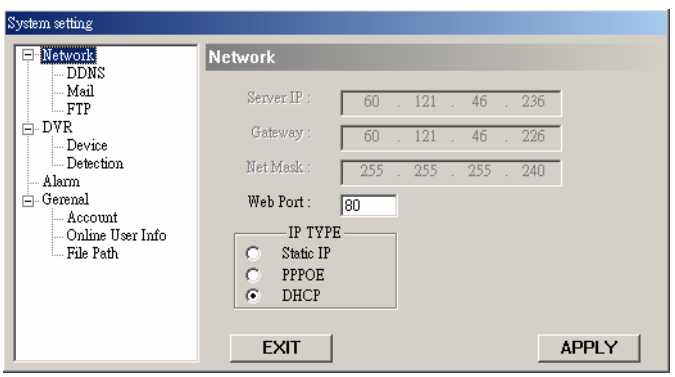


① Static IP:
key in the server IP, gateway, net mask, and web port.

② PPPoE:
Key in the “username” and “password” provided by your ISP supplier. PPPoE will also need to apply DDNS service to get “Hostname” to correspond to dynamic IP address. Please refer to P.37.



③ DHCP:
This DHCP function need to be supported by router or cable modem network with DHCP service. DHCP will also need to apply DDNS service to get “Hostname” to correspond to dynamic IP address. Please refer to P.37.

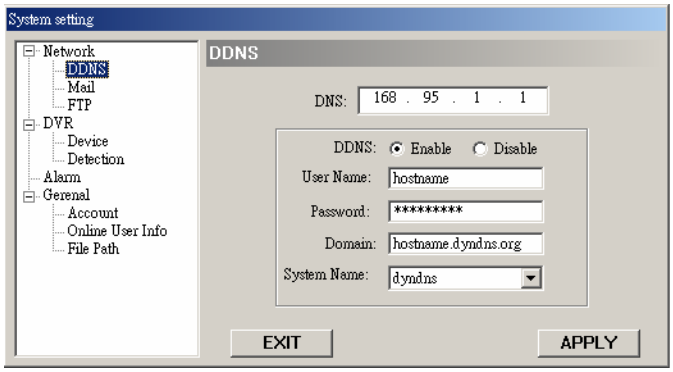


NOTE:
Some router brand may need to restart the DVR to get the IP address.

DDNS

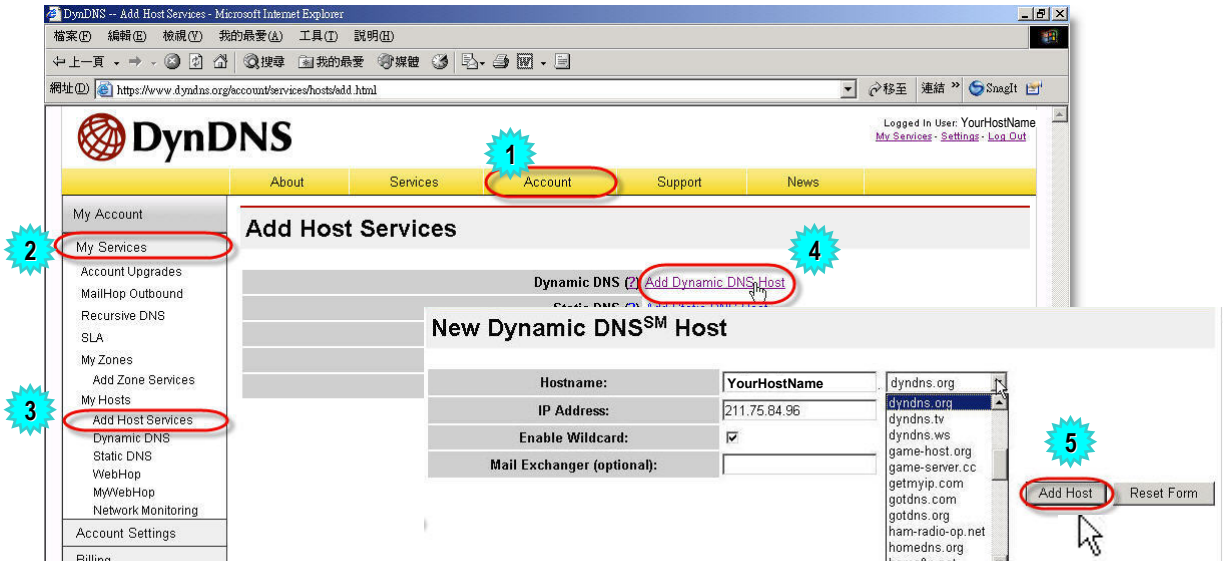
① DDNS is a service for transforming dynamic IP to corresponding to a specific “Hostname”.

② Enable the DDNS function.
Key in the “DDNS username” into “username”.
Key in the “DDNS password” into “password”.
Key in the “Hostname” into “Domain”.
Choose the “DDNS system name”.

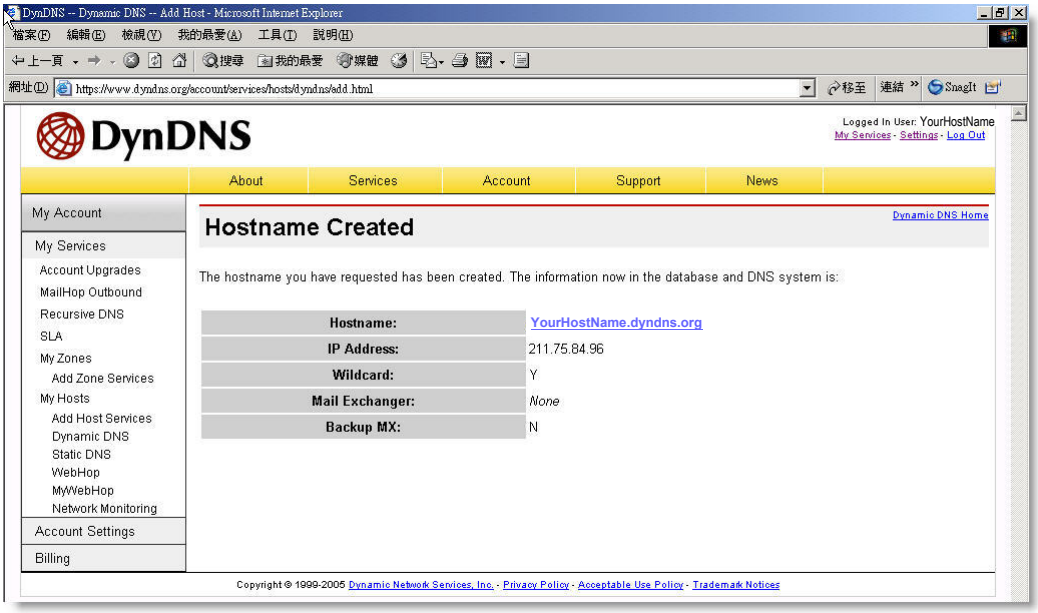


DDNS APPLY:

- ❑ Go to a website which provide free DDNS services. For example, “http://www.dyndns.org”.
- ❑ Create an account in DynDNS.
- ❑ After created your account, you will receive an confirmation e-mail within a few minutes. To complete registration, please follow the directions that you will receive. You must complete these steps within 48 hours to complete your registration. If you do not the confirmation e-mail within an hour or so, request a “password reset” (http://www.dyndns.org/account/resetpass/).
- ❑ Use the DDNS username and password to login into the DynDNS.
- ❑ Create Hostname.
Login → “Account” → “My Service” → “Add Host Services” → “Add Dynamic DNS Host” → Enter and choose the hostname → Click on “Add Host”.



❑ DDNS Hostname created.



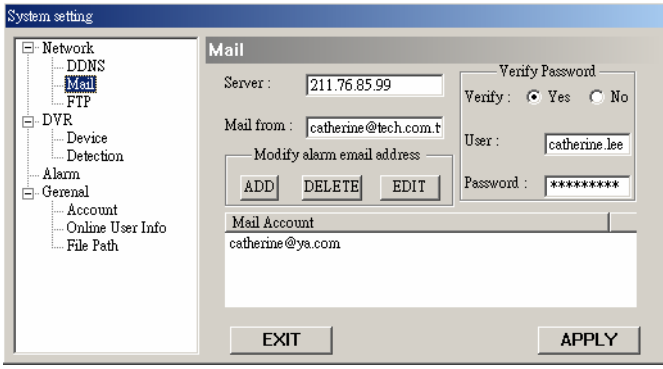
Mail

① When alarm is triggered, the Video Web Server will capture the instant picture (10 JPEG pictures max), and e-mail it to the assigned recipients.

② You can get information (SMTP server) from your e-mail system supplier.

③ You can add the email addresses where motion trigger captured pictures or film will be sent to by setting “Modify alarm email address” .

④ If the mail server require verify password, please key in username and password.

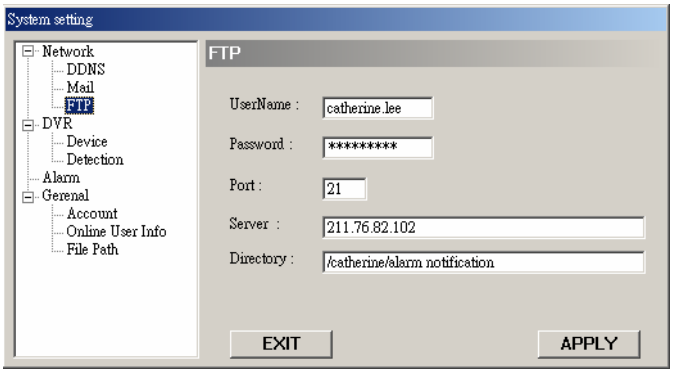


Note1: To get alarm mail when there is a motion trigger, you must enable the function of e-mail notification in the Alarm setting.

2: Please to key in the entire mail address in the “Mail from” box to ensure mails will not be blocked by some SMTP.

FTP

① When motion alarm is triggered, the video server will capture the instant picture and upload the captured image to the assigned FTP site.

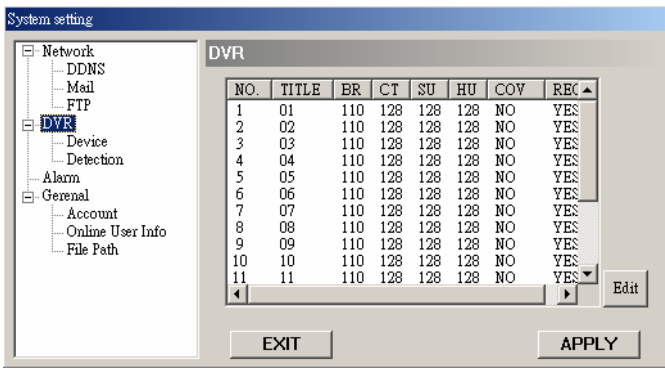


Note: To get alarm notification at FTP site when there is a motion trigger, you must enable the function of FTP notification in the Alarm setting.

DVR – Camera Setting

① You can get the setting information of the connected cameras in the window.

② You can select a specific camera and press “Edit” button to set the brightness / contrast / saturation / hue of the camera. After setting, press “OK” to confirm.

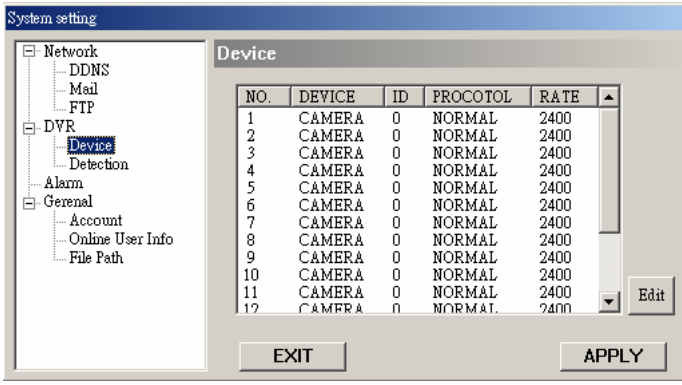

System setting
Network
DDNS
Mail
FTP
DVR
Device
Detection
Alarm
Gerenal
Account
Online User Info
File Path
DVR
NO. TITLE BR CT SU HU COV REC
1 01 110 128 128 128 NO YES
2 02 110 128 128 128 NO YES
3 03 110 128 128 128 NO YES
4 04 110 128 128 128 NO YES
5 05 110 128 128 128 NO YES
6 06 110 128 128 128 NO YES
7 07 110 128 128 128 NO YES
8 08 110 128 128 128 NO YES
9 09 110 128 128 128 NO YES
10 10 110 128 128 128 NO YES
11 11 110 128 128 128 NO YES
Edit
EXIT
APPLY

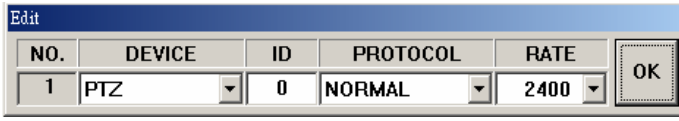
Device

① You can edit all the external device in this Windows.

② Select the device, and then press “Edit” button to set up “Device Type”, “ID No.”, “Protocol Type” and “Baud Rate” to control the equipments via Video Web Server.

③ This video web server supports different AP screens for control the following peripherals: Camera, PTZ.



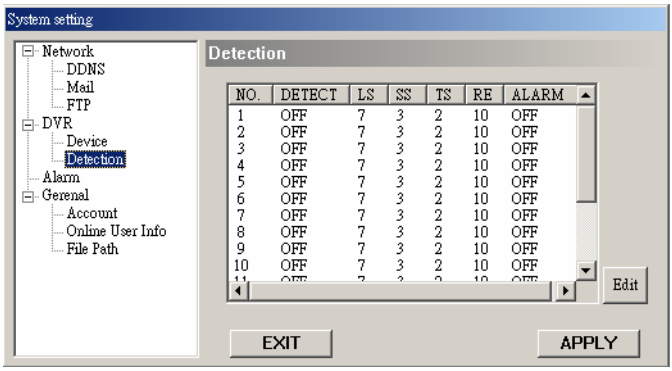


Detection

① You can set the detection area and detection sensitivity factors in this window.

② Select the device, and press “Edit” button to enter the setting page.

③ In the area setting page, users could use PC mouse to select the detection area.



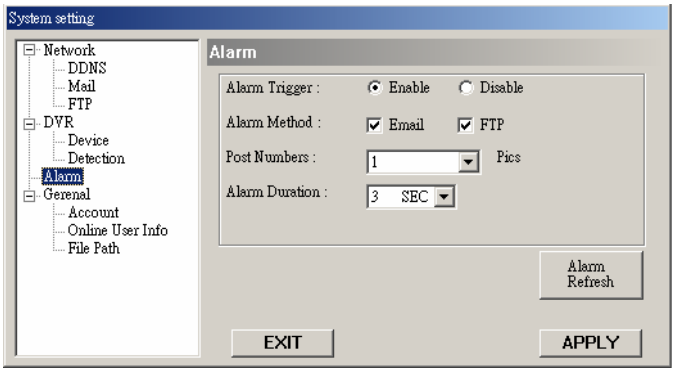
① Alarm Trigger:
Enable or disable Email and FTP notification function.

② Alarm Method:
Two selections—Email or FTP.

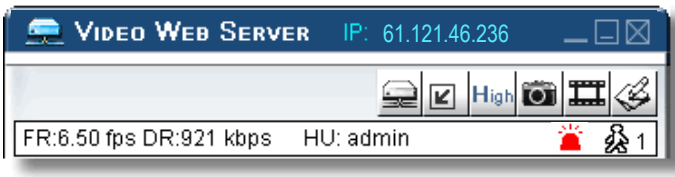
③ Post Number:
MJPEG pictures (1-10 pictures).

④ Alarm Duration:
You can set the alarm duration time for 3 sec., 15 sec., 30 sec., 1 min., or 30 min..

⑤ Alarm Refresh:
Clean the alarm message " " which is shown on the screen.



Note: Enable the alarm trigger function. When the alarm is triggered by the external device, such as PIR or Sensor, you can find " " icon showed on the screen. And the Video Web Server will start recording automatically.



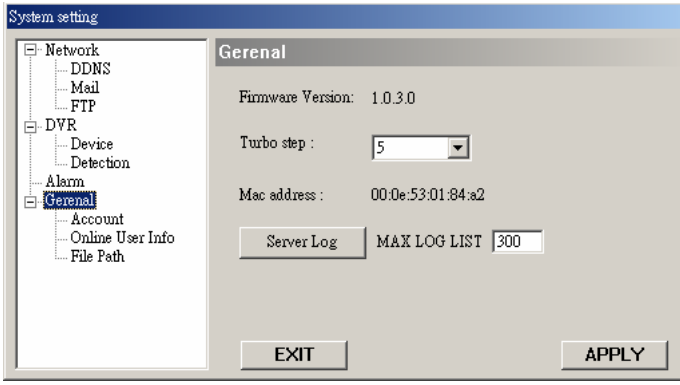
General

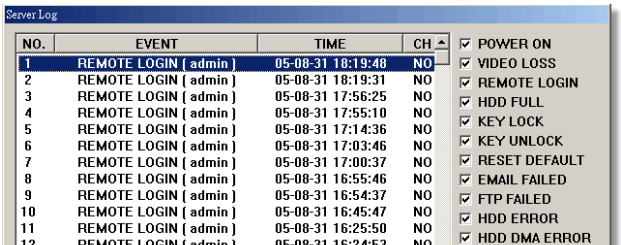
① You can get the information of firmware version in the window.

② You can select "turbo step" (1 - 10).
To speed up menu selecting or the control of the PTZ camera under video web server, you can activate "Turbo" function by clicking this button. Users are allowed to change the turbo steps from 1 to 10.
Ex. If you activate the TURBO function, and set "5" for turbo step, then when you press one of the button up/down/left/right, one mouse click will as if you click 5 times.

③ Max Log List: Set the maximum number of log list.

④ Server Log: Press "Server Log" button

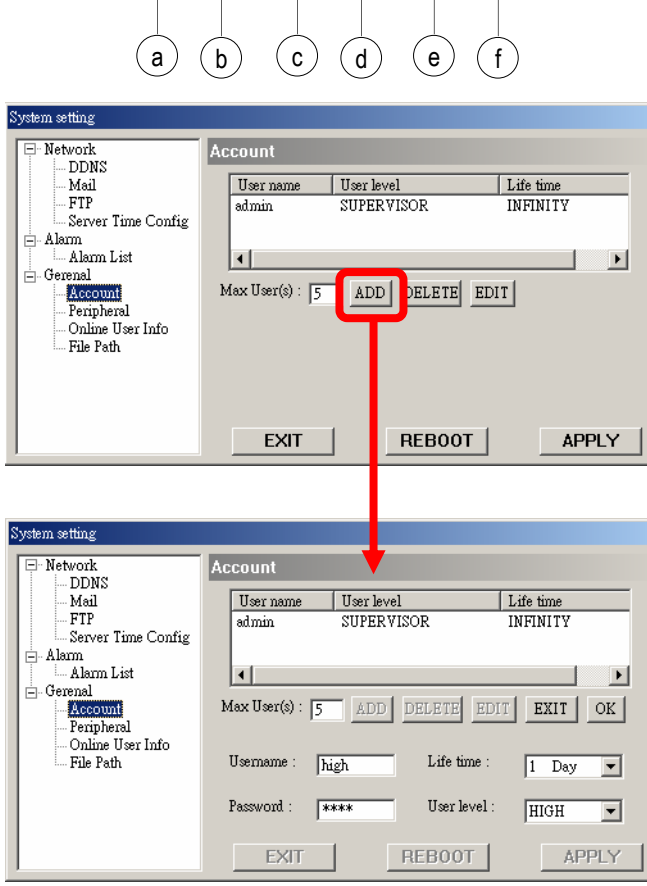



Server Log
NO. EVENT TIME CH
1 REMOTE LOGIN (admin) 05-08-31 18:19:48 NO
2 REMOTE LOGIN (admin) 05-08-31 18:19:31 NO
3 REMOTE LOGIN (admin) 05-08-31 17:56:25 NO
4 REMOTE LOGIN (admin) 05-08-31 17:55:10 NO
5 REMOTE LOGIN (admin) 05-08-31 17:14:36 NO
6 REMOTE LOGIN (admin) 05-08-31 17:03:46 NO
7 REMOTE LOGIN (admin) 05-08-31 17:00:37 NO
8 REMOTE LOGIN (admin) 05-08-31 16:55:46 NO
9 REMOTE LOGIN (admin) 05-08-31 16:54:37 NO
10 REMOTE LOGIN (admin) 05-08-31 16:45:47 NO
11 REMOTE LOGIN (admin) 05-08-31 16:25:50 NO
POWER ON
VIDEO LOSS
REMOTE LOGIN
HDD FULL
KEY LOCK
KEY UNLOCK
RESET DEFAULT
EMAIL FAILED
FTP FAILED
HDD ERROR
HDD DMA ERROR

① Set up the user's account (Max 5 accounts) , password, life time, and authority level (Max 5 accounts on line at the same time).

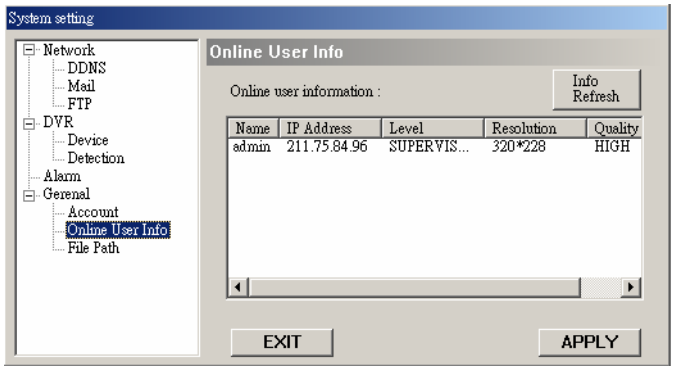
② User's level:
SUPERVISOR —
Control all the functions ("a", "b", "c", "d", "e" and "f").
HIGH —
Control only "a", "b", "c", "d" and "e" functions, but cannot control "f" function.
NORMAL —
Control only "a", "d", and "e" functions, but cannot control "b", "c" and "f" functions.
GUEST —
Watch the image only. Can only use the "a" function.

③ Life time :
According to different authority level, different accounts can stay online for different time period (1min, 5min, 10min, 1hour, 1day, infinity).



Online User Info

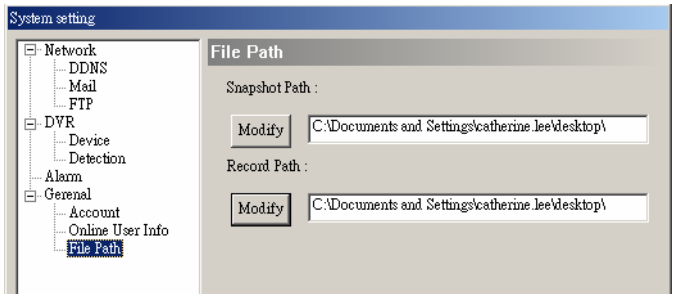
① You can get all the online users' information here (Name, IP Address, Authority Level, Resolution, and Image Quality).



File Path

① Snapshot Path:
You can assign the route for snapshot image.

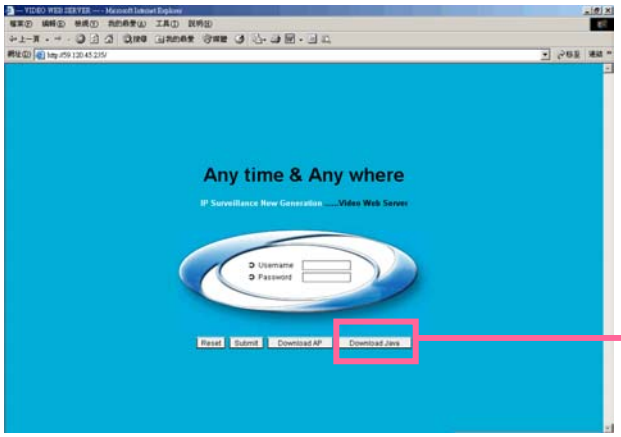
② Record Path:
You can assign the route for recording file.



6.7 CONNECT TO AP VIA IE BROWSER

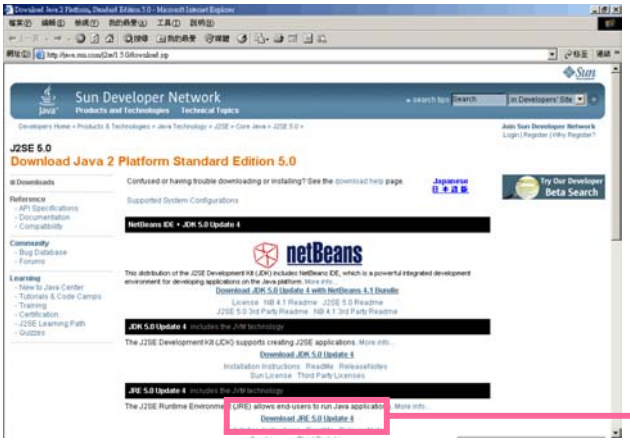
You can also connect to the video Web Server E via IE browser.
This function is suitable in both Windows 2000 and Windows XP.

Step 1: Type IP address into the URL address box and press “enter”. Then you’ll see the following page.



Download JAVA

Step 2: Press the “Download JAVA” button, and you’ll see the following page.



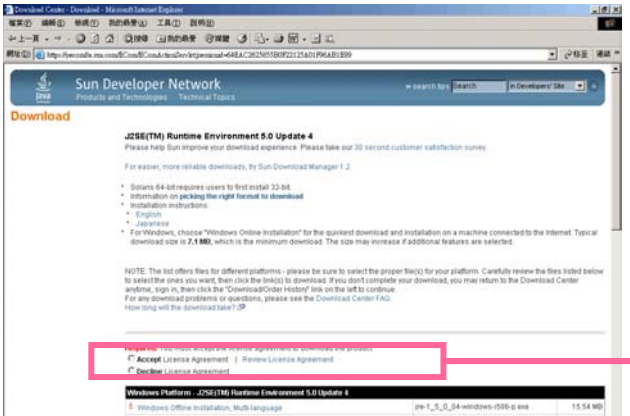
NOTE:

JAVA setup file “

” is also included in the licensed software AP disk.

Download JRE 5.0 Update 4

Step 3: Press “Accept License Agreement”.



Accept License Agreement

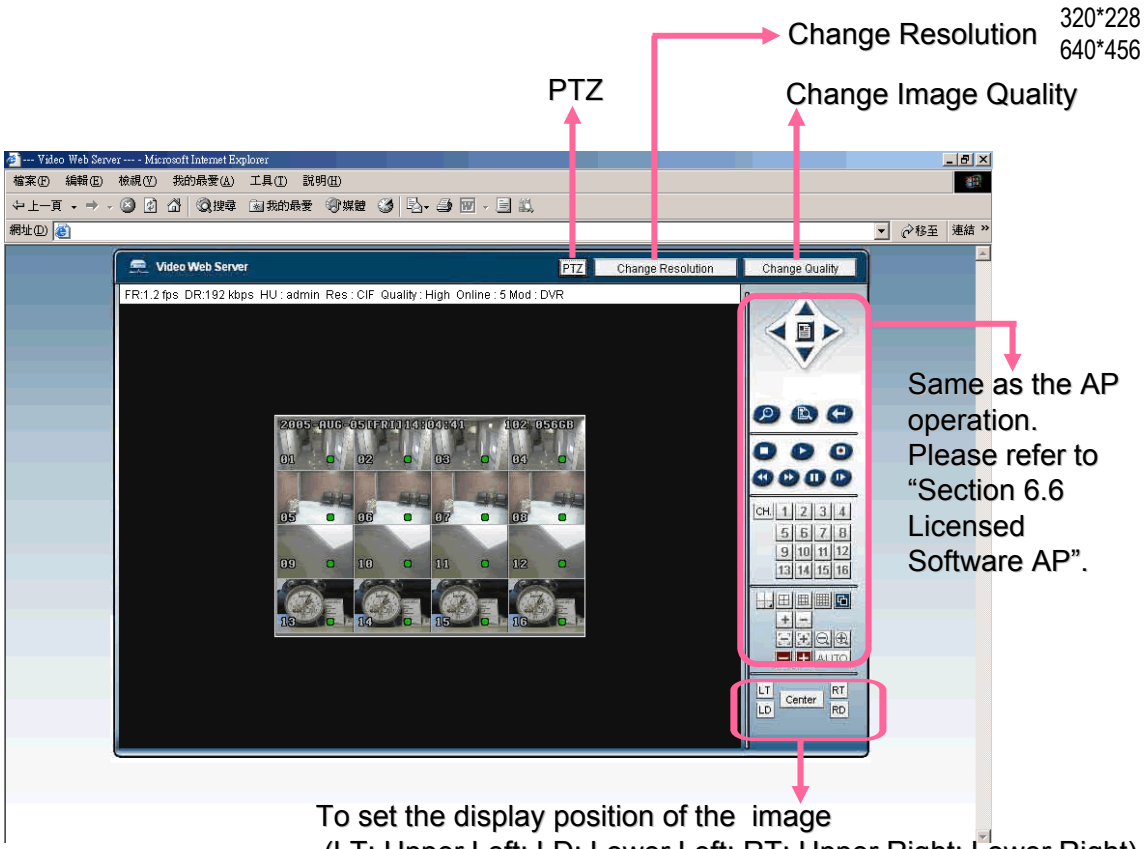
Step 4: Choose "Windows Offline Installation" or "Windows Online Installation".

Step 5: Take "Windows Offline Installation" as a example.
Save the setup file "jre-1_5_0_04-windows-i586-p" on the desktop of PC.

Click "

" twice to setup.

Step 6: After installation, please type the IP address of your DVR into the URL address box and press "enter". Then you'll see the login page. Key in the "username" and "password". Then you'll see the following page.


Change Resolution
320*228
640*456
PTZ
Change Image Quality
--- Video Web Server --- - Microsoft Internet Explorer
Video Web Server
PTZ
Change Resolution
Change Quality
FR:1.2 fps DR:192 kbps HU : admin Res : CIF Quality : High Online : 5 Mod : DVR
Same as the AP operation. Please refer to "Section 6.6 Licensed Software AP".
LT
Center
RT
LD
RD
To set the display position of the image
(LT: Upper Left; LD: Lower Left; RT: Upper Right; Lower Right)

6.8 GPRS

GPRS function Installation and Viewing (Take **Motorola** 768i for example)

1) Your mobile service provider must have GPRS service, and the phone handset needs to support GPRS and Java MIDP 2.0 to run the application.

2) Connect to the website http://211.22.74.18 via the web browser of your cell phone. (Make sure that your GPRS function is working).

3) Download and install “16CH_MPEG-4” / “8CH_MPEG-4” / “4CH_MPEG-4”.

4) After installation, the “16CH_MPEG-4” / “8CH_MPEG-4” / “4CH_MPEG-4” icon will shown on the desktop of the phone.

5) Click the icon of the “16CH_MPEG-4” / “8CH_MPEG-4” / “4CH_MPEG-4” video server to enter the setting frame.
Please type in IP address, port, username, and password of the DVR, which you like to see And then press “connect” button.

6) After connected to the “16CH_MPEG-4” / “8CH_MPEG-4” / “4CH_MPEG-4” video server, you will see AP interface shown on the screen and will see “Online” on title.

7) Wait 3 minutes for video signal to coming out.

8) After video signal is shown, you could monitor and control your security system handily anytime, anywhere.

NOTE: It’s not suggested to set the DVR port as 80 port.
Because some telecommunication service provider may regulate 80 port.

6.9 OPTIONAL PERIPHERAL

For the operation of the following peripherals, please refer to their manual individually.

1) IDA (independent disk array).

2) VGA connector.

7.1 FAQ

Please refer to the FAQ table below for easy trouble shooting. The table below describes some typical problems and also their solutions. Please check them before calling your DVR dealer.

PROBLEM	SOLUTION
No power	Check power cord connections
	Confirm that there is power at the outlet
Not working when pressing any button	Check if it is under Key Lock mode
	Press any key and then key in the password to exit Key Lock mode
No recorded video	Check if the HDD is installed and connected properly
Timer Record enable does not working	Check if the Record Enable is set to YES
No live video	Check camera video cable and connections
	Check monitor video cable and connections
	Confirm that the camera is power supplied
	Check the setting of camera lens
DVR keeps rebooting	Users could align the power connector and HDD closely, or change another suitable HDD.

APPENDIX #1 – INSTALL THE HDD

Carefully following the steps to ensure correct installation.

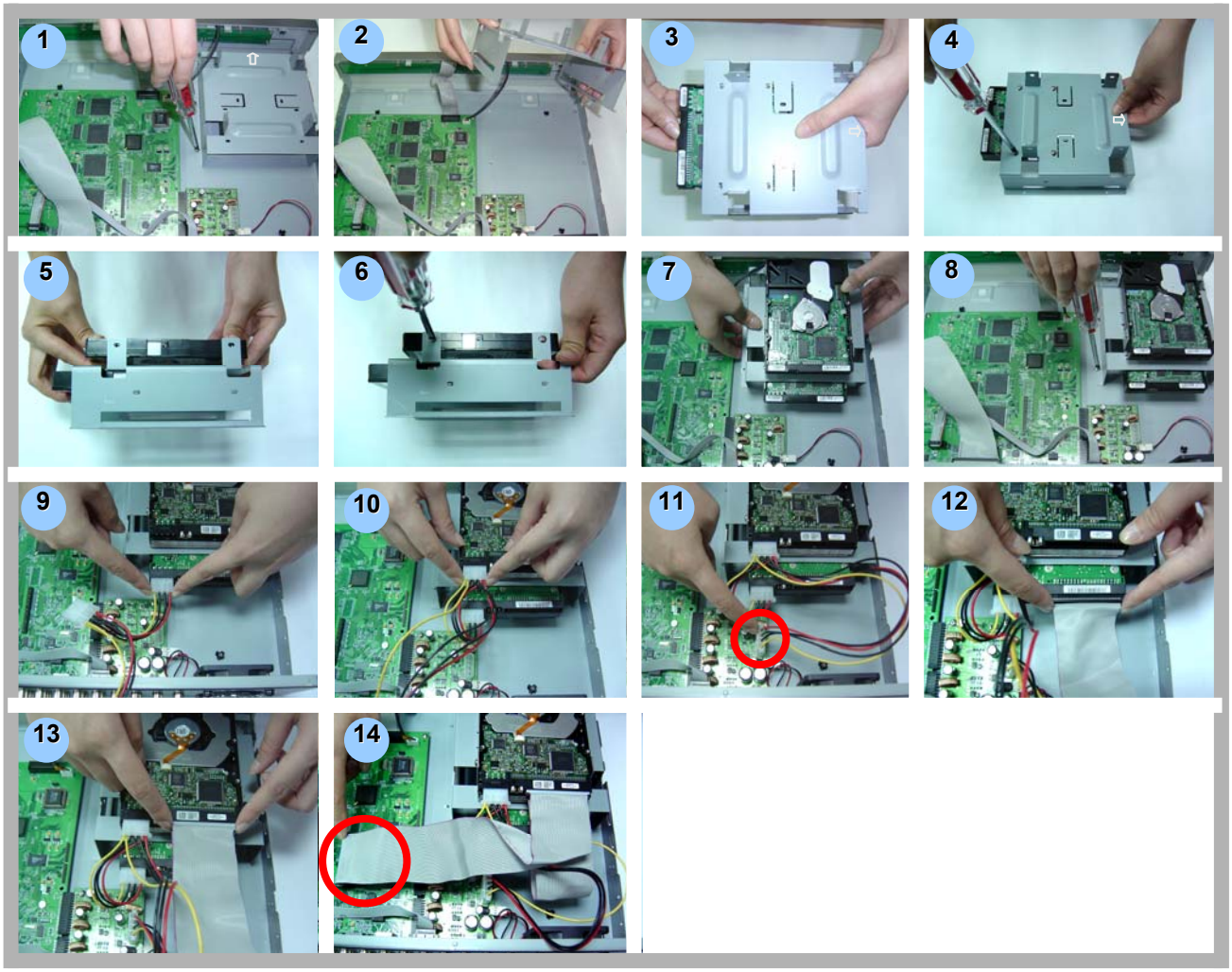
*** Note: Please set one HDD to “Master Mode” or “Single Mode” ***

1) Open the upper cover of the DVR and screw out the bracket. 1 ~ 2

2) Screw HDD to the HDD bracket. 3 ~ 8

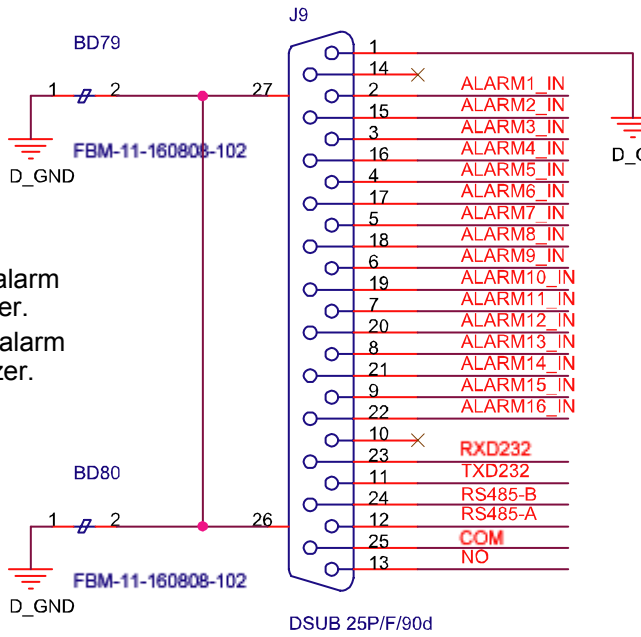
3) Connect the HDD to power connector and IDE BUS (make sure to align the HDD precisely to the pin connection). 9 ~ 14

4) Close the upper cover of the DVR.



APPENDIX #2 – PIN CONFIGURATION

[16 / 8 Channels]



PIN 1. **GND**
GROUND

PIN 2. ~ PIN 9. **ALARM INPUT**
To connect wire from ALARM INPUT (PIN 2 -- 9) to GND (PIN 1) connector,
DMR will start recording and buzzer will be on.
When Menu/ Camera/ Alarm is set up to “Low” : When alarm input signal is “ Low ”, the unit starts to record and buzzer.
When Menu/ Camera/ Alarm is set up to “High” : When alarm input signal is “ High ”, the unit starts to record and buzzer.

PIN 10. **PIN OFF**

PIN 11. **TXD232**
DMR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

PIN 12. **RS485-A**
DMR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

PIN 13. **EXTERNAL ALARM NO.**
Under normal operation COM disconnect with NO. But when Alarm triggered, COM connect with NO.

PIN 14. **PIN OFF**

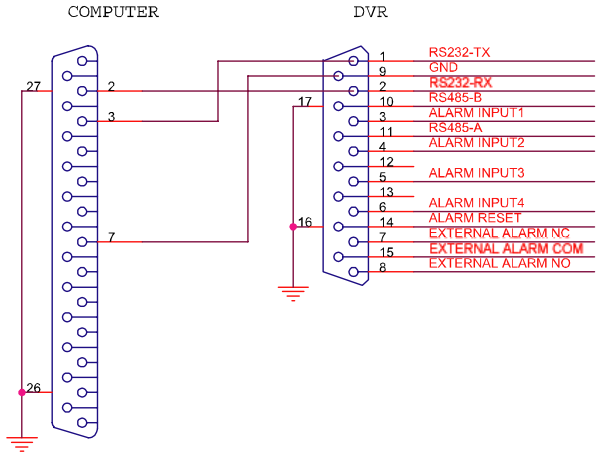
PIN 15. ~ PIN 22. **ALARM INPUT**
To connect wire from ALARM INPUT (PIN 15 -- 22) to GND (PIN 1) connector,
DMR will start recording and buzzer will be on.
When Menu/ Camera/ Alarm is set up to “Low” : When alarm input signal is “ Low ”, the unit starts to record and buzzer.
When Menu/ Camera/ Alarm is set up to “High” : When alarm input signal is “ High ”, the unit starts to record and buzzer.

PIN 23. **RXD232**
DMR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

PIN 24. **RS485-B**
DMR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

PIN 25. **EXTERNAL ALARM COM**

[4 Channels]



PIN 1. **RS232-TX**

DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

PIN 2. **RS232-RX**

DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

PIN 3. ~ PIN 5. **ALARM INPUT**

To connect wire from ALARM INPUT (PIN 3 -- 5) to GND (PIN 9) connector, DVR will start recording and buzzer will be on.

When Menu/ Camera/ Alarm is set up to “Low” : When alarm input signal is “ Low ”, the unit starts to record and buzzer.

When Menu/ Camera/ Alarm is set up to “High” : When alarm input signal is “ High ”, the unit starts to record and buzzer.

PIN 7. **EXTERNAL ALARM NC**

Under normal operation COM connect with NC and disconnect from NO. But when alarm is triggered, COM disconnect with NC, and connect with NO.

PIN 8. **EXTERNAL ALARM NO.**

Under normal operation COM disconnect with NO. But when Alarm triggered, COM connect with NO.

PIN 9. **GND**

Signal GND.

PIN 10. **RS485-B**

DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

PIN 11. **RS485-A**

DVR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

PIN 12, 13. **PIN OFF**

PIN 14. **ALARM RESET**

To connect wire from ALARM RESET (PIN 14) to GND (PIN 9) connector, it can disable ALARM. An external signal to

ALARM RESET (PIN 14) can be used to reset both ALARM OUTPUT signal and DVR’s internal buzzer. When alarm has been triggered, signal becomes “Low”, and it will stop all alarm activities. Under normal operation, signal remains “High”.

PIN 15. **EXTERNAL ALARM COM**

Under normal operation COM disconnect with NO. But when alarm triggered, COM connect with NO.

APPENDIX #3 – RECORDING TIME TABLE

Take 16 channels as an example

1. Take NTSC system and outdoor environment as an example.
2. Recording time varies depending on the following factors:
   * Different camera quality
   * Different picture composition (such as frequency of the object movement)

Record mode	Quality	IPS	500GB record time(hour)	Record day
Frame	Best	120	109	4.6
		60	192	8.0
		30	349	14.6
		15	565	23.5
	High	120	138	5.8
		60	243	10.1
		30	442	18.4
		15	714	29.8
	Normal	120	182	7.6
		60	319	13.3
		30	581	24.2
		15	939	39.1
	Basic	120	293	12.2
		60	516	21.5
		30	939	39.1
		15	1517	63.2
CIF	Best	480	130	5.4
		240	229	9.5
		120	417	17.4
		60	673	28.0
	High	480	184	7.6
		240	323	13.4
		120	587	24.5
		60	949	39.5
	Normal	480	242	10.1
		240	424	17.7
		120	773	32.2
		60	1249	52.0
	Basic	480	335	13.9
		240	588	24.5
		120	1071	44.6
		60	1730	72.1

APPENDIX #4 – COMPATIBLE USB BRAND

NOTE: Please upgrade the Firmware of the DVR to latest version to ensure the accuracy of following table

Manufacturer	Model	Capacity
Transcend	JetFlash 110	256MB
Transcend	JetFlash 110	512MB
Kingston	DataTraveler DTI KUSBDTI/256FE	256MB
Kingston	DataTraveler DTI KUSBDTI/256FE	512MB
PQI	Cool Drive (U339)	256MB
PQI	Cool Drive (U339)	512MB
Apacer	HANDY STENO HF202	256MB
Apacer	HANDY STENO HF202	512MB
SanDisk	Cruzer Micro	128MB
SanDisk	Cruzer Micro	256MB
SanDisk	Cruzer Micro	512MB

APPENDIX #5 – COMPATIBLE HDD BRAND

NOTE: Please upgrade the Firmware of the DVR to latest version to ensure the accuracy of following table

Brand Name	Model	Capacity	Rotation
HITACHI	Deskstar 180 GXP	120GB	7200 rpm
HITACHI	Deskstar 7K250, HDS722516VLAT20	160GB	7200rpm
HITACHI	HDS722516VLAT80	160GB	7200rpm
HITACHI	HDS722516DLAT80	160GB	7200rpm
HITACHI	Deskstar 7K250, HDS722525VLAT80	250GB	7200rpm
IBM	Deskstar 120GXP (80GB)	80GB	7200 rpm
IBM	Deskstar 120GXP (120GB)	120GB	7200 rpm
Maxtor	DiamondMax 536DX(60GB) 4W060H4	60GB	5400rpm
Maxtor	DiamondMax Plus 9	80GB	7200 rpm
Maxtor	DiamondMax Plus 9, Model#6Y120L	120GB	7200 rpm
Maxtor	DiamondMax Plus 9, Model#6Y160L0	160GB	7200rpm
Maxtor	MaxLine Plus Ⅱ, Model#7Y250P0	250GB	7200rpm
Maxtor	DiamondMax 10	160GB	7200rpm
Maxtor	DiamondMax 10	200GB	7200rpm
Seagate	Barracuda ATA IV, ST380021A	80GB	7200rpm
Seagate	Barracuda ATA V, ST3120023A	120GB	7200 rpm
Seagate	Barracuda 7200.7 Plus, ST3160023A	160GB	7200 rpm
Seagate	Barracuda 7200.8 ST3200826A	200GB	7200 rpm
Seagate	Barracuda 7200.8 ST3250826A	250GB	7200 rpm
Western Digital	Caviar WD1200BB-00CAA1	120GB	7200rpm
Western Digital	Caviar WD2000BB-00DWA0	200GB	7200rpm
Western Digital	CaviarSE WD2500JB	250GB	7200rpm

MPEG-4 DVR

High-end Pentaplexes

Live Display:
16CH Live Display with sharp images

Record:
Real Time Recording at 480IPS (NTSC) / 400IPS (PAL)

Play Back:
View recorded images without stop the machine

Back Up:
DVD R/W, CD R/W allow for easy file back up

Network:
Support Network function for
Remote Surveillance